

CAI
E705
F02

August 1983

UNIVERSITY LIBRARY



Interim Report of the Forest Industries Advisory Committee

to the
Honourable Edward C. Lumley
Minister of Industry Trade & Commerce
And Regional Economic Expansion



Digitized by the Internet Archive
in 2024 with funding from
University of Toronto

<https://archive.org/details/31761116355819>

CAI
TI 705
- 83F02

Interim Report
of the
Forest Industries Advisory Committee
to the
Honourable Edward C. Lumley
Minister of Industry, Trade and Commerce
and
Regional Economic Expansion

August 1983

Aussi édité en français



© Minister of Supply and Services Canada 1983

Cat. No. C 2-75/1983E

ISBN 0-662-12748-X



FOREST INDUSTRIES ADVISORY COMMITTEE

COMITÉ CONSULTATIF DES INDUSTRIES FORESTIÈRES

Co-Chairmen
Co-présidents

Ian A. Barclay
B.C. Forest Products Ltd.
Vancouver, B.C.
Tel: (604) 665-3818

James M. Buchanan
CPU/SCTP
Montréal, Québec
Tel: (514) 842-8931

The Honourable Edward C. Lumley, P.C., M.P.
Minister of Industry, Trade and Commerce
and Regional Economic Expansion
235 Queen Street, 11th Floor East
Ottawa, Ontario
K1A 0H5

Dear Mr. Lumley:

On behalf of the committee we hereby submit our Interim Report. Our attention has focussed on the more immediate concerns of business and labour as well as setting out a fairly comprehensive outlook for future directions.

The members of the committee, like the industries they represent, come from widely diverse interests whether they be management, labour, product or regional. We believe the consultation process has resulted in a significant degree of consensus on many of the major issues. This consensus is reflected in our report.

The message is quite clear. Competition for our markets abroad has become increasingly intense, hence we as a country will have to pay greater attention to productivity and cost competitiveness in order to survive and prosper. At the same time, we will also have to be much more sensitive to the individual needs of displaced workers and dependent communities affected by technological change and industrial modernization.

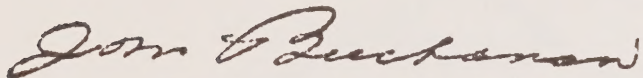
As you know, the forest products industry is Canada's largest industrial sector and is of critical importance to all regions in the country. We believe the forest products industry can continue to make a major contribution to Canadian economic growth, job creation and export development, given a more concerted effort and deeper understanding by business, labour and government. In fact, deliberations of this committee have gone a long way towards creating such a constructive environment.

We also feel very strongly that the prime responsibility for the development of Canada's forest products industry lies in the private sector. Virtually all of the action and support which we have requested from the federal government calls for a large commitment by business and/or labour.

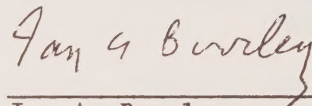
Since some of the recommendations concern areas of provincial jurisdiction, we have sent a copy of the report to each of the provincial governments.

During the course of our committee's work it became obvious that several subjects could not be dealt with in the time available. These matters are outlined in the report and will be dealt with in our continuing deliberations. We would also be most interested in knowing any other issues that you would like us to consider.

Respectively submitted.



James M. Buchanan
Co-Chairman



Ian A. Barclay
Co-Chairman

TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. FOREST PRODUCTS PROSPECTS WORLD-WIDE	2
3. EIGHT MAJOR ISSUES	4
4. RECOMMENDATIONS	6
A) Financial	6
B) Trade Development	10
C) Human Resources	12
D) Competitive Position	13
E) Forestry	14
F) Research and Development	16
5. CONCLUSION	19

Appendices

I) Forest Products Prospects World-Wide	I-1
A) Trade Outlook - Pulp and Paper Products	I-3
B) Trade Outlook - Wood Products	I-19
II) Forest Products Comparative Costs Study	II-1
III) Forestry References	III-1
IV) Terms of Reference of Forest Industries Advisory Committee	IV-1
V) Committee Members	V-1
VI) List of Organizations Which Made Submissions to the Committee	VI-1
VII) Sector Profile - The Canadian Forest Industry	VII-1
Annex A - Medium-term Outlook	VII-15

1. INTRODUCTION

This is the first report of the Forest Industries Advisory Committee. It has been prepared following consultations with many trade associations, labour organizations and research institutes that are a part of the forest industry, as well as with independent analysts, several departments of the federal government and a provincial government.

The report focusses on the most important immediate concerns of the industry, and offers recommendations. They are addressed to the federal government, although some have implications for the provincial governments, and the forest industry itself.

The recommendations pertain largely to primary forest products manufacture. Secondary manufacturing is represented on the Committee, but the time available for preparation of this interim report has not permitted study of the characteristics and priorities of that sector. As part of its future work, the Committee will examine these matters, which are important inasmuch as secondary forest products manufacture generates a relatively large number of jobs per dollar of invested capital, and helps in achieving more complete utilization of the forest resource.

The report also studies the longer-term prospects of world-wide growth of forest products demand. It weighs the strengths and weaknesses of Canada in seeking to serve that demand, and assesses the Canadian industry against its competitors in the United States and overseas.

Finally, the report attaches as an appendix, a Sector Profile of the Canadian Forest Industry, prepared by the Department of Industry, Trade and Commerce/Regional Economic Expansion. Although not involved in its preparation, the Forest Industries Advisory Committee endorses this profile and recommends it as a basic reference source to the industry and its place in the Canadian economy.

That place is one of overwhelming importance. The forest industry:

- employs some 300,000 Canadians and ships annually products worth more than \$20 billion;
- in terms of employment, wages and salaries, and value-added by manufacture, is Canada's biggest manufacturer, and makes a larger net contribution to the nation's balance of payments than metals, food and agriculture, fisheries and the automotive industries combined;

- is present in all ten provinces, and is the mainstay of more than 300 communities across the country.

The Forest Industries Advisory Committee hopes that this report will contribute to a deeper understanding of the industry and a constructive approach to the issues that confront it.

2. FOREST PRODUCTS PROSPECTS WORLD-WIDE

World-wide requirements for forest products are expected to increase substantially in the coming years, responding to higher standards of living and levels of literacy, and reflecting the extraordinary range of uses to which wood and wood fibre can be put.

The increases will not likely be as sizable as in the past. But on the world stage, an average gain of even 2 to 3 per cent per year translates to very large quantities. It presents Canada with excellent opportunities for greater shipments of forest products, and thus for major new investment in manufacturing facilities, and the creation of jobs both directly and indirectly in every region of the country.

At present, Canada accounts for more than one-fifth of the world's total exports of manufactured forest products. If that proportion could be retained, let alone increased, the years to come would be marked by significant growth in the Canadian forest industry and, as a consequence, significant gains for Canada in terms of economic activity, exports, and incomes.

To make that a real possibility will require enormous effort by those who work in the industry, as well as by governments, which help to set the economic environment. Some of the directions that effort should take are set forth later in this report, as the Advisory Committee's recommendations.

In this section, the Committee will sketch very briefly what seems to lie ahead in the world market-place. Its more detailed market review, looking ahead to 1986 and 1993, is included as Appendix I.

Primary forest products divide roughly into two sectors: pulp, paper and paperboard, and lumber, plywood and other wood products. Each has its particular characteristics and prospects, and is considered separately both here and in Appendix I.

Pulp, Paper and Paperboard

In pulp, paper and paperboard, the most comprehensive studies on world needs are carried out by the Food and Agriculture Organization of the United Nations. Its latest forecasts, completed a few years ago, are that consumption of paper and paperboard in Canada's most important markets, North America, Western Europe, and Japan, will increase by an average of a little over 3 per cent annually between 1980 and 1990.

It is clear that much of that increase will be served by local production in the countries where it occurs. But for pulp and paper exporters who are cost-competitive in international markets, there will be no lack of opportunity.

For Canada, as is indicated in the Committee's more detailed review, the opportunity will occur particularly in market pulp, newsprint, and some other grades of printing papers. Given a favourable cost structure, and access to world markets, these can lead the pulp and paper sector to a healthy rate of growth in the next 10 years. The key will be cost.

Wood Products

In the wood products sector, there will also be good possibilities for higher Canadian shipments in the 1980s and 1990s, although the rate of increase in world demand probably will be less than in pulp and paper, and average some 1 per cent per year.

This is considerably lower than in the 1970s, reflecting especially the fact that residential construction activity in North America, Japan and Western Europe is unlikely again to reach the levels of a few years ago. Demographic trends in these major markets suggest that a period of slower growth lies ahead, particularly in the 1990s. Nevertheless, there will be attractive market opportunities and, as in pulp and paper, the key to success will be costs in Canada as compared with costs in the most important competing supply regions, such as the United States and Scandinavia.

Softwood lumber is by far the largest component of the wood products sector. Canada today accounts for some 11 per cent of total world production, and this is expected to remain relatively stable during the next decade. As in pulp and paper, the largest market for Canadian lumber is the United States. Overall, Canada accounts for some 45 per cent of all international trade in that product.

Plywood is another of the principal wood products, but is manufactured largely for use within Canada. Thus its success will depend primarily on the level of Canadian construction activity, and the ability of plywood to withstand competition from competing materials, especially waferboard, which has experienced strong growth in recent years and is expected to continue to do so in the future. In contrast to plywood, about one-half of Canadian waferboard production is exported, primarily to the United States.

3. EIGHT MAJOR ISSUES

As the economic recovery gathers strength, world demand for forest products will once again increase, and continue to increase through the 1980s and 1990s. In that sense, forest products world-wide is still very much a growth industry. For Canada, this presents a number of challenges that will have to be met.

The magnitude and complexity of these challenges are without precedent. In some respects, they demand a new set of attitudes, and the setting aside of deep-rooted Canadian illusions that reach back a long way into our history.

Of course, many periods of economic difficulty, like that of the past two years, have marked the history of the Canadian forest industry. But their causes have generally been depression, recession, or excess productive capacity. Today, looking out to the mid and late 1980s, and early 1990s, it is not that the international economic landscape is bleak. Indeed, as noted earlier, world needs for pulp and paper, lumber, and other forest products in all likelihood will increase substantially. But Canada faces fundamental issues that time and economic revival alone will not resolve.

The following are eight of those issues:

- i) Tougher competition in all of our traditional forest products markets around the world; from local producers and from exporters in the United States, Scandinavia and elsewhere in Europe, South America, Africa and Asia.
- ii) Wider and more frequent swings in currency exchange rates, which drastically alter international competitive relationships and can single-handedly open or close markets for exports of industrial commodities like many forest products.
- iii) Inflation, and different rates of inflation from country to country, which cause uncertainty in the commitment of capital for major new investment, and lead to the extreme exchange rate changes that are so disruptive of traditional trade flows.

- iv) Greater turbulence in the major western economies, which has broken the fairly smooth progression of economic advance that characterized the 1950s and 1960s, and created more volatile markets, especially for exporters.
- v) World-wide technological developments in manufacturing and in the marketplace, that are stimulating forest products investment elsewhere in the world and have buried the notion that vast softwood forests would always assure Canada a dominant place in the forest products sun.
- vi) A need for further large capital investment in the forest industry to keep pace with the state of the art in world forest products manufacture, at a time when financial resources have been so weakened by the losses of the past two years that they may take several years to recover.
- vii) A need to deal more adequately with difficult economic situations where jobs and lives are disrupted and forest industry communities affected by change that cannot be avoided.
- viii) And finally the arrival of wood supply constraints, as Canada reaches the limits of forest industry growth based on the natural forest and enters the era of forest renewal, and as pressures rise for use of the industrial forest for other purposes.

These issues underlie this interim report of the Forest Industries Advisory Committee. They are the setting to the recommendations that the Committee is making, and to the more detailed review of the industry's world-wide prospects which then follows.

The Committee is confident that the Canadian forest industry has the potential to succeed in the years ahead, and make an impressive contribution to Canadian economic growth, job creation, and export development. But we have to do things well or the rest of the world will make other arrangements to satisfy the future increases in its needs for forest products.

As has already been noted, those needs will increase more slowly than in the past, perhaps 2 to 3 per cent per year, as compared with 4 to 5 per cent in the 1950s, 1960s, and early 1970s. At the same time, the competition to serve them will intensify. Quality, reliability, and price will be the only criteria by which Canadian suppliers will be judged.

There is no shortage of cellulose fibre in the world; that is the real message for Canada in the 1980s and beyond. And even if much of that fibre lacks the exceptional technical properties of our northern Canadian softwoods, the world seems to have an infinite capacity for making do, if the price is right.

In these circumstances, the only goal for Canada that has any real meaning is to be a cost-competitive and dependable supplier of the highest quality forest products. That will require a major and concerted effort by management, labour and government, reinforced by a clear perception of the economic realities which confront us at home and abroad.

4. RECOMMENDATIONS

The recommendations of the Committee cover six broad subjects and have two aims. One is to strengthen the ability of Canada's forest products companies to compete around the world, attract investment, and create jobs and income for Canadians. The other is to assist in easing the impact of economic change on people and communities, so that the burden of change is borne fairly, and is tolerable.

The recommendations in each of the six subjects are preceded by a brief analysis and comment.

A) To strengthen the financial position of the forest industry

Financial strength is essential to Canadian competitiveness in manufacturing and marketing forest products. It is needed especially for the financing of capital expenditures to increase efficiency and productivity, and expand old plants or build new ones in response to opportunities in the market-place.

During the period 1978-82, capital and repair expenditures in the Canadian forest industry totalled \$15.3 billion, as compared with \$8.0 billion in the previous five years. By all previous standards this was a very large effort. In the eastern provinces, most individual pulp and paper programs were supported by federal/provincial grants under the Pulp and Paper Modernization Program. Many older pulp and paper and wood products mills in communities all over Canada were transformed by large new investment with important benefits in terms of higher productivity, environmental improvement, energy conservation, and a greater ability to compete around the world.

While a large number of these major expenditure programs are now complete, many still remain to be undertaken. Indeed, it is now clear that a high level of capital spending has become a permanent requirement in the forest industry to

keep pace with competitors elsewhere in the world. Unfortunately, the recession and its resulting financial losses have made it impossible for most companies to maintain former levels of investment.

Many borrowed heavily to complete large capital spending programs already under way. But no company can follow that route indefinitely, and in many instances the limits have been reached. Equity financing should also be important in funding modernization programs, and fortunately, has become more feasible in recent months. Nevertheless, the financial structure of many forest companies is still too debt-heavy.

The Advisory Committee acknowledges that the cash squeeze must be solved in large part by the industry itself and that as economic conditions improve and markets strengthen, financial resources will gradually be replenished. It also acknowledges that the recent budget of the Minister of Finance provides for tax changes that will help. Nevertheless, to improve liquidity and stimulate capital investment, it considers that some additional adjustments in the corporate tax system should receive serious consideration. Such adjustments would also help to ensure that increased investment plays its part in the recovery of the Canadian economy as a whole.

The Committee has also addressed a particular problem in the pulp and paper sector of the forest industry, namely, the provision from time to time of large capital grants to support construction of new manufacturing capacity. It considers that such grants distort the normal process of industrial growth, and in periods of soft markets cause very difficult economic problems, including employment disruptions in other pulp and paper mills.

Recommendations:

- i) The Advisory Committee is deeply sceptical of the wisdom of government making major capital grants for the expansion of manufacturing capacity in pulp and paper. We believe that expansion should occur only in response to market forces.

This particular sector of the forest industry is amongst the most capital-intensive in all of the Canadian industry. Major grants for expansion therefore provide an extraordinary advantage to those who receive them. Furthermore, modern technology and economics demand that new manufacturing units be large. They are, as a consequence, very disruptive if force-fed into life before their time.

Grants for modernization and productivity improvement, whether in pulp and paper, wood products, or secondary wood manufacturing, are not so disruptive in the market place. Nevertheless, because they are by nature discriminatory and discretionary, they may be no more equitable than grants for expansion.

On the issue of grants for modernization, the Advisory Committee has been unable to reach a consensus. Some members feel that such grants should be replaced by the broadly-based, even-handed investment incentives that can be provided through the tax structure. Others feel that modernization grants do have a place, particularly when special circumstances in an industry demand heavy investment for this purpose, and the funds are simply not available.

This difference of view must reflect the extent to which grants have become imbedded in the private investment process over the past generation, not only in Canada but in other countries as well. There can be no denying that they are addictive, to those who give as well as to those who receive. That does not mean that they are the best system, nor the most efficient tool for stimulating capital investment.

Besides tax-based investment incentives, another alternative to grants for modernization might be special government loans that would be available on a non-discriminatory basis. The Advisory Committee intends to examine this possibility more thoroughly, and offer comments in a later report.

- ii) A new, national program to promote industrial restructuring and development in Canadian industry in general was announced in April by the Minister of Industry, Trade and Commerce/Regional Economic Expansion. While the details are not yet clear, we understand that the program will have only limited application to the major modernization programs of the pulp and paper sector but significant application to the smaller units of the forest products industry, particularly sawmilling and other secondary manufacturing. The Advisory Committee would like to have the opportunity of commenting on the details of this program when they are available but before they are finalized.
- iii) The financial health of many industries has in recent years grown heavily dependent on exchange rates. The instability of those rates has eroded confidence, and made forward planning treacherous, particularly in capital-intensive, export-oriented industries like forest products. Now that inflation is declining

throughout the industrial world, we would hope it may become possible to achieve greater stability in exchange rates. We therefore urge that governments, including Canada's, make that a high priority.

Canada's industrial cost structure and productivity performance suggests that today, a level of 80¢ - 82¢ for the Canadian dollar vis-à-vis the U.S. dollar expresses fairly accurately the relative competitiveness of the two economies. Clearly, in forest products, any early return to par or even close to par would bring financial disaster.

- iv) The Committee applauds the permanent changes in the investment tax credit proposed in the recent budget. It also commends the intent to maintain some advantage, at least temporarily, in cases where companies are not in a taxable position, by the refundable provisions as well as the share-purchase tax credits.

Beyond these constructive measures, the Committee urges that unexpired tax credits earned prior to budget day be given the same treatment as the permanent changes in credits to be earned in the future -- i.e., be favoured with the increased period over which these can be utilized -- and that they be permitted the same flexibility on the ability to claim. This is extremely important to the forest industry, where major investment programs of recent years generated large credits that may otherwise be lost in the next five years.

- v) The Canadian forest industry is capital intensive and has borrowed heavily in foreign currencies. When this debt is repaid at the prevailing rates of exchange for the Canadian dollar, significant capital losses are at times incurred. Such losses are deductible from capital gains when computing income subject to taxation. But if they exceed capital gains, the excess cannot be deducted under the present law. The Committee recommends that the Income Tax Act provide that any such excess of capital losses from debt repayment be deductible from income in the year it is incurred.
- vi) Because of the cyclical nature of business in the forest industry, some companies generate tax losses which cannot be immediately offset against taxable income that may exist within another corporate entity of the same group. the Committee recommends the adoption of a provision for corporate group relief, whereby losses may be transferred by member companies in a controlled group of companies, and claimed by other member companies of the group.

- vii) The fast write-off for manufacturing and processing assets is important in offsetting the effect of inflation on replacement costs. However, the exclusion of logging equipment from this provision is unfair, considering the importance of increased mechanization to productivity in this segment of the industry, and the large capital cost of such mechanization. We recommend extension of the fast write-off to logging equipment.
 - viii) As Canadian tariffs are reduced on many papers and paperboards, and on secondary manufactured products, there will be the need to adapt the existing production facilities to increased competition at home, and also to enhance their ability to compete in export markets. Structural changes will be required and companies should receive special consideration to assist with this process. Increased levels in investment tax credit, up to 50 per cent, should be considered for suitable programs to achieve these results.
- B) To reinforce Canada's world-wide forest products efforts in trade development

In forest products marketing, both domestic and international, the forest industry is competent and experienced. Nevertheless, government involvement in a variety of support roles is essential. Well-staffed government trade offices around the world, highly-competent trade negotiation teams, and adequate transportation and port facilities; all these are vital. So is a political commitment at the highest levels to the further expansion of world trade, which implies continuing support for multilateral tariff reductions and for efforts to minimize non-tariff barriers to trade.

Today, changes in trade patterns, and their effect on trade balances, as well as shifting foreign exchange rates and local economic difficulties, have created pressures in a number of countries to raise existing trade barriers and to erect new ones. Believing that such a swing to protectionism would damage long-term opportunities, and this be detrimental to Canada, the Advisory Committee supports moves toward freer trade. Such overall strategic positions are extremely important. Flowing from them are measures to reinforce Canada's forest products export capability in quite specific ways. On these the Committee offers the following recommendations:

Recommendations

- i) The Co-operative Overseas Market Development Program has been very successful in increasing and diversifying exports of wood products from British Columbia. It should be continued beyond the 1985 termination date of

the current agreement. In addition, this type of co-operative promotional program should be available to the wood products sector elsewhere in Canada. Ultimately, there must be integration of such efforts.

- ii) Major federal financial support should be provided for the in-grade testing program developed over the past five years under the auspices of the Canadian Wood Council, to develop new engineering strength data for Canadian softwood lumber. Such data will be important to export success, and indeed this is a significant matter in terms of Canada's trade. Yet the ruinous economic conditions in wood products of the past two years, and the high cost of mounting a defense in the U.S. softwood lumber case, have made it extremely difficult to finance as a purely private sector effort.
- iii) High priority must be given by the Government to the negotiations with the European Community concerning the duty-free newsprint quota. This issue is extremely important to the future of Canada's newsprint exports to Europe, one of the largest newsprint markets in the world. It is also vital to the lives of some individual Canadian mills. The Government should seek to maintain a position that will permit a satisfactory growth of Canadian newsprint exports to the community.
- iv) The dispute between the Canadian and United States governments over what constitutes final resolution of the Tokyo Round of accords on paperboard items has left a residual element of doubt as to whether the United States may at some future date take a unilateral action damaging to the Canadian pulp and paper industry's opportunities in the United States market. Conclusive and satisfactory resolution of these items is important to the industry's trading opportunities.
- v) It is the Advisory Committee's view that valuable opportunities exist for more exhaustive consultation between government and industry on positions to be taken by Canada in trade negotiations, both as the positions are being developed and during the negotiations themselves. As one element in this, we would submit that when the vital interests of an industry are at stake, that industry should be given observer status at the negotiations where it could act as an immediate source of accurate information for the negotiating team. The Committee recommends that the Government give serious consideration to establishing such a practice as part of a greater on going consultation with industry on trade matters.

C) To utilize the human resources of the forest industry more effectively, and respond to the impact of economic change

The deep recession of the past two years has exposed serious weaknesses in the way our society adjusts to changes in human resource needs, in the forest industry as in other industries. The fact is, we deal inadequately with the human problems that arise from changing needs for particular kinds of jobs and skills, or from work force reductions caused by advances in technology or plant obsolescence.

The problem is urgent, and solutions must involve government, management and labour. It is urgent because employment losses of the past two years are in many instances not temporary but permanent. Furthermore, it must be recognized that modernization of some facilities frequently involves the permanent closure of others that are not cost-competitive, either parts of existing mills or complete mills. Finally, during the next decade, as Canada adjusts to technological change and developments in the market place, forest industry manpower needs will also change: increasing here, decreasing there, calling less for some old skills and more for some new ones.

Given the structural adjustments that are going to have to take place in the industry in the coming years, the Advisory Committee considers it essential that there be a concerted effort to make such adjustments less painful. It will also be very important to ensure that Canada has available the trained human resources it needs to capitalize on economic opportunities.

Recommendations:

- i) Spending of public monies to modernize industry operations should be accompanied by firm financial commitments to workers adversely affected by the changes. More specifically, a portion of public funds should be assigned to the protection of those workers. There should be appropriate severance pay provisions, special unemployment benefits, and lengthy advance layoff notices.
- ii) The Labour Adjustment Benefit Program should be expanded to accommodate the labour adjustment requirements of the forest industry. This would have particular application to older workers laid off as the result of a modernization program or closure.
- iii) Adverse effects of modernization on employment may be minimized by a commitment to make early retirement or voluntary separation sufficiently attractive to reduce the workforce to an economic level.

- iv) Federal employment and manpower measures include a broad range of programs dealing with unemployment, job creation, work-sharing, training, manpower mobility, industrial restructuring, and related subjects. Indeed, so complex is the range that it is extremely difficult for an employer or employee to comprehend and assess what is available and relevant. The Advisory Committee believes the Government should launch a more extensive educational effort to explain and interpret these programs. It is convinced that the difficulties of industrial readjustment might at least to some extent be eased by a greater knowledge of them and therefore a wider application.
 - v) A new forest sector strategy would make it propitious to improve not only skills and occupational training but also safety training and working conditions, and to reduce wasteful turnover so as to achieve the goal of a stable, qualified and well-paid labour force in the industry.
 - vi) The Committee acknowledges that labour/management relations in the forest industry must be improved. Unfortunately, the time available for preparation of this interim report has not been adequate for a proper examination of the subject. However, it is an important and legitimate field of study, which the Committee will address and give the highest priority.
 - vii) In a more general vein, the Committee recommends that governments, companies and unions be more active in economic education. There must somehow be developed amongst Canadians a wider understanding of Canada's position as an exporter and as a forest industry country. This is related only indirectly to the subject of human resources. Nevertheless, we consider it essential to public acceptance of policies that will strengthen the place of Canada in the forest products world.
- D) To provide a continuing assessment of the world-wide competitive position of Canada in forest products

No subject is of such critical importance to the Canadian forest industry as its competitive position in the major world markets, where it must sell to live. Management, labour and governments should all be able to agree on approximately where Canada stands in a point in time. That knowledge is crucial to initiatives in policy development, investment planning, labour negotiations, and like matters of vital concern. To monitor the Canadian competitive position, comparative cost data is required, on which all can agree.

Recommendation:

- 1) The Advisory Committee recommends development of a data base of comparative costs in forest products manufactured in Canada and other major producing areas of the world. Such data should be developed on a continuing basis to keep it current, and government, labour and management should all participate in developing the format for the data base. A more detailed proposal on this subject is attached as Appendix II.

E) To increase the productivity of Canada's forests

Recognition of the transition from the era of the natural forest to that of the managed forest has triggered policies and programs all across Canada to increase forest productivity. This new awareness has had great significance for the long-term health of the Canadian economy. Although forest renewal and development is the primary responsibility of the provincial governments, as owners of most of the forest resources, it also involves the federal government, as the recipient of large revenues from forest industry operations and as a partner in a major initiative of national importance.

The past three years' chronology of this initiative, from the federal standpoint, is worth recording. In September 1980, the Canadian Forest Congress in Toronto examined the state of forestry in Canada, and achieved a broad consensus on the need for a much larger effort than had been made to that time. A year later, the Banff Conference entitled Canada's Forests: Transition to Management issued an Agenda for Action which suggested with more precision what should be done and by whom.*

Late in 1981 the Canadian Forestry Service issued its paper, A Forest Sector Strategy for Canada, which took account of the Banff recommendations and laid out a strategy for the federal government in research and development, human resources and forest renewal. It was followed by submissions to Cabinet on these three subjects, and since then by federal action on each one.

On forest renewal, the federal strategy was expressed in a policy statement issued publicly in September, 1982. It provided for greater federal financial support for forestry, to be channelled through a new series of federal/provincial agreements. The first, with Nova Scotia, has now been signed and the others will follow over the next two years.

* Appendix III, reproduces this statement, and lists several other documents that are mentioned here.

All of this activity represents support for and initial action on the important area of forest renewal. Throughout this period, the Canadian Forestry Advisory Council has been very active in its role as advisor to the federal Minister of the Environment. It has examined most aspects of forestry (silviculture, education, manpower requirements and research), and made comments and recommendations which have helped to stimulate and shape the new federal initiatives.

The past three years have thus been a particularly important period in redefining and strengthening the federal role in forestry. The Forest Industries Advisory Committee believes that the Government has made a stronger commitment, and that the evidence of industry/government cooperation can only be a good sign for the future.

The Committee has identified five specific issues which must continue to form the agenda as Canada moves further down the road of improved forest management. They are:

- 1) forest regeneration;
- 2) forest protection;
- 3) supply of trained manpower;
- 4) educational and training facilities; and
- 5) research

No doubt the pace of progress in these matters will be uneven; each province has its own perceptions and priorities on forestry. But there is no question that momentum has been achieved, and a new course set whose main direction will not change. These matters are thoroughly and authoritatively covered by the proceedings, minutes and reports of the Canadian Forestry Advisory Council.

As better forest management takes hold across Canada, the federal government may well be asked to increase its financial commitment. But it is still too soon for that. Forestry programs cannot be established overnight and there is a limit to the amount of money that can be spent effectively over the next few years. However, to complete this initial stage of the federal overhaul in forestry, the Advisory Committee does have one recommendation. It pertains to structure rather than policy and programs.

Recommendations

- i) The Committee recognizes the constructive initiatives that have been taken in forestry over the past three years by the federal government, acting through the Canadian Forestry Service within the Department of the Environment. At the same time, we believe that the perception of the significance of forestry within the federal structure is low in relation to its importance in the Canadian economy.

At the least, an official of deputy minister rank should be responsible for the federal role in forestry. We would not feel comfortable at this time in offering specific advice on whether this responsibility should be lodged in a department oriented more closely to economic affairs or resource development. However, the Committee intends to give the matter further study in the months to come.

On the industry side, a new organization is being established, to provide for the first time a national voice in forestry matters for the whole forest industry. It will be called the Canadian Forest Industries Council, and it will work naturally and effectively with those responsible for the federal effort in forestry, wherever they are located within the Government.

F) To strengthen the technological base for forest products manufactured in Canada

There is a broad consensus that Canada must increase its research and development effort to ensure its industrial success. Indeed, both government and industry must attempt to ensure that the nation is on the leading edge of technology throughout its industrial structure.

The Committee recommendations on this subject are in two parts. First of all, they deal with research and development in the forest industry as a whole, and more specifically, a comment on recent proposals on R&D made by the Minister of Finance. They then consider the three co-operative research establishments in which the federal government already participates: Pulp and Paper Research Institute of Canada, Forest Engineering Research Institute of Canada, and Forintek Canada Corp. All do excellent work, and constitute a first-class core for research and development in most aspects of forest industry operations. If building from strength is a good principle, here is a place to put it to work.

Recommendations:

- 1) The Advisory Committee has studied the proposals for new tax incentives tabled recently in Parliament by the Minister of Finance. It endorses the general thrust of the proposals and, in particular, replacement of the present incremental deduction by an increase in the R&D tax credit. However, if the Government's goals for industrial R&D in Canada are ever to be met, it is doubtful that even this higher level of tax credit will be adequate.

The proposals of the Minister say that Canada's tax incentives for R&D compare favourably with those in other countries. If this is indeed the case, then there must be special factors at work in our society, perhaps including our links with the U.S., which tend to discourage the growth of R&D. This would then suggest that to achieve an acceptable level may require extraordinary measures, going well beyond what is now being proposed. The Committee therefore recommends that the Department of Finance proposals be amended to increase the R&D tax credit by 15 percentage points rather than the 10 that is intended, and to provide that these credits are non-taxable; or to provide an equivalent incentive in another form.

- ii) The Committee believes that the three co-operative research establishments should be funded by government and industry, on a flexible basis consistent with past tradition and practice. It therefore recommends that the federal government immediately express a long-term commitment to support, along the lines suggested in the following recommendations.
- iii) Pulp and Paper Research Institute of Canada, the oldest of the three, has always been a partnership. Since 1956, the federal government has provided the physical plant, while the industry has been responsible for the operating costs. In 1983, the industry is funding a PPRIC operating budget of some \$15 million, and has agreed on a 60 per cent increase in Institute activities from 1983-92. This growth cannot occur without additional laboratory facilities.

As a consequence, the Committee wishes here to record its appreciation for the recent announcement that the government, through the Department of Industry, Trade and Commerce, will finance construction, at a cost of \$15 million, of a new laboratory facility in British Columbia and a \$2 million expansion of the facility at Pointe Claire, Quebec. This is urgently needed, and will do much to strengthen pulp and paper research in Canada.

- iv) Forest Engineering Research Institute of Canada is supported equally by its member companies and the federal government, acting through the Canadian Forestry Service. But at present, the federal contribution to FERIC is subject to a ceiling of \$1.4 million annually. As Canada emerges from recession, industry contributions will soon climb above this level. The Committee therefore recommends that government financial support be increased, on a matching basis with industry, to implement a long-term R&D strategy for the future.

- v) Closely related to FERIC work is the subject of forestry equipment. The Committee proposes that the existing programs of the Department of Industry, Trade and Commerce/Regional Economic Expansion in development of new technology be reviewed, to provide a program for the forest industry which even in difficult times could create special incentives to encourage renewed development of promising concepts, and in normal times provide adequate funding to selected projects to ensure the complete development of equipment before it is sent to the field as a production machine.
- vi) Forintek Canada Corp. is the former Forest Products Laboratories of the Canadian Forestry Service and is still funded partially by CFS. Since its founding in 1979, it has struggled to establish a solid base of financial support from the federal and provincial governments, and private industry. Progress has been made but serious financial problems are still to be resolved to develop that sense of stability and permanence that a research establishment should have.

The long-term support from the industry for Forintek has been slow in developing because of the fragmented nature of the solid wood sector and the very difficult financial conditions it has been experiencing. With these conditions now improving, Forintek is vigorously pursuing a commitment from industry for the long-term financing of a 25 per cent share of its budget. Additional commitments from government should be based on securing this level of support from industry.

On that basis, the Committee recommends that the federal government make a long-term commitment to provide 50 per cent of the financial support required by Forintek, with the provinces and private industry each to provide 25 per cent. The Committee also recommends that to deal with immediate and pressing financial problems, the Government provide a one-time grant of \$1.2 million to correct the shortfall in Forintek's scientific equipment purchases since 1979; and provide \$650,000 for structural repairs and energy conservation measures to its Ottawa building and temporary repairs to its building in Vancouver; and in the longer term, provide the company with a more suitable building in Vancouver.

Finally, in the area of productivity improvement, the Committee recommends government support to Forintek to finance a series of regional seminars across Canada to promote the use of micro-electronic technologies in the wood products sector in conjunction with the appropriate industry trade associations and labour organizations across Canada.

5. CONCLUSION

The foregoing recommendations of the Advisory Committee are designed to address the chief concerns of the Canadian forest industry at the present time. They are a kit of tools, which the Committee believes government should employ in supporting the industry's efforts to meet the challenges it faces and to respond effectively to the large expected increases in world needs for forest products in the coming years.

As noted earlier, the recommendations are addressed to the federal government. But some have implications for provincial governments, and the industry itself. The Committee therefore plans to review these with the provinces, to the extent that is appropriate.

During the course of the Committee's work, it became obvious that several subjects could not be studied adequately in the time that was available for preparation of this interim report. We would therefore intend to pursue these subjects in the coming months. They include:

- labour/management relations to which we give the highest priority;
- productivity, a matter of serious national concern;
- some further work on the most appropriate form for government investment incentives;
- the secondary forest products manufacturing industry;
- and the question of where the responsibility for forestry should be lodged within the federal government.

On each of these matters, as well as any other that may arise in the months to come or that the Minister may wish to have reviewed, the Advisory Committee will comment at a later date.

APPENDIX I

FOREST PRODUCTS PROSPECTS WORLD-WIDE

FOREST PRODUCTS PROSPECTS WORLD-WIDE

As part of its work, the Forest Industries Advisory Committee has studied the probable world-wide needs for forest products in the future and tried to assess their meaning for Canada. It has concluded that excellent market opportunities will exist. For Canada this means the chance to enjoy the economic benefits of further forest industry growth for many years to come.

The Committee's world-wide market assessment has looked ahead first to 1986 and then to 1993. There has not been time for original research. But on the basis of existing work, supplemented by the knowledge and judgement of the Committee and its advisors, we have drawn a number of conclusions and these are set forth in the following sections.

Appendix IA sets out the medium-term trade outlook for pulp and paper products while wood products are dealt with in Appendix 1B.

APPENDIX IA

TRADE OUTLOOK-PULP AND PAPER PRODUCTS

TABLE OF CONTENTS

	<u>Page</u>
1. Woodpulp Exports	I-4
2. Newsprint	I-9
3. Uncoated Groundwood Printing Papers	I-14
4. Uncoated Woodfree Book and Writing Paper	I-15
5. Linerboard	I-16
6. Kraft Papers	I-17

TRADE OUTLOOK - PULP AND PAPER

Canada has the natural resource potential, the manpower, and the technical and managerial skills required to share in the increased demand for pulp and paper products that is foreseen in both domestic and foreign markets.

However, the ability of Canadian pulp and paper producers to benefit from increased demand depends upon the producers achieving cost competitiveness. To do this, the individual companies will need to contain their unit labour and material costs, and improve their efficiency. Governments will need to establish an economic environment where competitive cost inputs of the other factors of production -- wood fibre, energy, transportation -- will be available.

The U.S. pulp and paper industry is, in broad terms, the lowest cost producer of pulp and paper in the world. And that industry is Canada's major competitor - both in Canada and the United States markets. Additionally, the U.S. industry is becoming an increasingly active participant in overseas markets where it is seeking to enlarge its market share. To compete effectively in all these areas, Canadian costs must be competitive with U.S. costs.

The following projections for the years 1986 and 1993 are based on examination of past trends, current conditions, and the assumption of a continuing and modest improvement in world economic conditions. Of course, cyclical swings in economic conditions will occur, and depending on their timing, could advance or delay by a few years' attainment of the forecast levels. Of far greater importance, however, will be the competitiveness of Canadian industry in general, and the Canadian pulp and paper industry in particular. Forecast demand represents an opportunity: it is the world's low-cost producers that will serve that demand, attract the necessary investment in production facilities and reap the income and jobs that go with success.

The outlook for the two principal export sectors of pulp and paper for the next three years is for a gradual recovery from the depressed levels of 1982. In newsprint, world consumption is forecast to increase by some 4 million tonnes by 1986 and shipments by Canadian mills to increase by 1.4 million tonnes. Because of increased capacity, the newsprint sector operating rate is expected to be about 90 per cent, up from 81 per cent in 1982.

Shipments of market pulp are projected to increase faster and rise by nearly 40 per cent by 1986. That sector, which operated at less than 80 per cent of capacity in 1982, will operate close to maximum capacity in 1986.

World demand for both these products is expected to continue into the next decade at slightly lower rates of growth. Canada thus has an opportunity to participate in these large and growing markets in the 1990s.

	Average <u>1979-81</u>	<u>1982</u>	Forecast	
			<u>1986</u>	<u>1993</u>
<u>Woodpulp (thousand tonnes)</u>				
World demand for market pulp	20,050	18,400	23,000	-
Canadian exports	6,900	5,800	8,300	-
<u>Newsprint (thousand tonnes)</u>				
World consumption	23,900	23,300	27,300	32,500
Canadian shipments	8,755	8,075	9,475	-

Four other grades of paper and board have been studied and they have widely differing prospects. Shipments of groundwood printing papers, while a relatively small tonnage at present, are expected to grow at a rate of 5 per cent per year to 1986 and at 4 per cent from then until 1993. Shipments of book and writing papers, while growing at a somewhat lower rate, will increase substantially in the next 10 years. In linerboard, Canada is not competitive on a world-scale basis and growth will be slow. Kraft papers face stiff competition from other materials and shipments are expected to decline slightly over the next decade.

Shipments of Linerboard and Paper Other Than Newsprint

(Thousand Tonnes)

	<u>1980</u>	<u>1982</u>	Forecast	
			<u>1986</u>	<u>1993</u>
Groundwood printing	615	645	780	1,030
Uncoated Book and Writing	685	640	720	885
Linerboard	1,170	900	1,015	1,170
Kraft Papers	<u>530</u>	<u>455</u>	<u>500</u>	<u>435</u>
TOTAL	3,000	2,640	3,015	3,520
Domestic shipments	1,750	1,515	-	-
Exports	<u>1,250</u>	<u>1,125</u>	-	-
	3,000	2,640		

The Outlook for Woodpulp Exports

Woodpulp exports are one of the most important elements in the Canadian forest products economy. The average level in the years 1979 to 1981 was 6.9 million tonnes, and the average annual value during this period was \$3.6 billion, making woodpulp one of

Canada's most important exports. The value of exports in 1980 was 4½ times the value ten years previously and eleven times the value in 1960. Woodpulp is, therefore, an important export commodity and one that has grown rapidly in the past two decades.

In summary, woodpulp exports by Canada, which were an annual average of 6.9 million tonnes in the three-year period 1979 to 1981 and which fell to 5.8 million tonnes in 1982 as the result of the recession are expected to recover sharply over the next three years, to reach a level of 8.3 million tonnes in 1986.

Canadian Exports of Woodpulp

(Thousand Tonnes)

	Average 1979-1981	1982	Forecast 1986
Chemical paper grade pulp	6,340	5,370	7,425
Dissolving pulp	300	220	250
Mechanical pulp	215	230	600
TOTAL	6,855	5,820	8,275

Discussion of the outlook for each of the above categories for 1986 and comments on the outlook for exports to 1993 are given in the following sections.

Market Pulp

(a) Background and Recent Trends

Market pulp makes up about 40 per cent of the white chemical pulps used for paper making in the world. The total volume of shipments of chemical paper grade market pulp by all producers outside the Comecon countries was an annual average of 20.1 million tonnes in the three-year period 1979 to 1981. As the world's largest supplier of market pulp, Canada shipped an average of 5.5 million tonnes in that period or 27.5 percent of the total.

Shipments of Market Pulp by Supplying Area

	Average 1979-81 (Thousand Tonnes)
Canada	5,520*
United States	4,125
Nordic Countries	5,020
Others	5,450
	20,115

*Does not include shipments to Canada.

Total world shipments of market pulp increased at a rate of 3.2 per cent annually in the decade of the 1970s. This rate was slower than that for the output of the printing, writing and tissue paper industries, the chief users of market pulp which grew at a rate of 4.3 per cent per year. The increased use of secondary fibres, fillers and coatings by the paper industry, and a greater degree of integration of paper manufacturing with the production of woodpulp in certain markets, account for the slower growth rate.

Canadian market pulp experienced a somewhat higher rate of growth than the world total in the 1970s, about 4 per cent annually compared to the world figure of 3.2 per cent noted above. The higher Canadian rate resulted from the fact that shipments by the Nordic countries declined during the 1970s as many small, older sulphite mills were closed for environmental and efficiency reasons. But many new producers entered the market pulp business in the past decade, producers based in Europe, Latin America, Africa and New Zealand, and using hardwoods or wood from softwood plantations. Shipments by these "other producers", that is, producers outside North America and the Nordic countries, increased from 2.5 million tonnes at the beginning of the decade to 5.45 million tonnes in 1980, a growth rate of 8 per cent annually.

Market pulp is the residual fibre supply in most uses so that shipments are disproportionally affected by business cycles and the level of output of the paper industry. For example, export shipments of market pulp from Canada in the recession year of 1982 were 17 per cent lower than in 1980 despite the fact that paper production declined by only 2 to 3 per cent in that period.

(b) The Outlook for 1986

The economic recovery now under way in most parts of the world will be the dominant influence on the world and Canadian market pulp industries over the next two to four years. If economic recovery continues through 1986, as has been assumed for this study, world demand for market pulp is forecast to increase to 23 million tonnes, an increase of 15 per cent over 1980 but 25 per cent higher than the depressed 1982 level. Canadian exports of market pulp are expected to increase to 6.5 million tonnes, some 18 per cent higher than in 1980 and about 40 per cent higher than in 1982.

The world market pulp industry operated at less than 80 per cent of capacity in 1982. With capacity growing only 5 per cent by 1986, and demand increasing by 20 per cent, it is clear that the operating rate will increase to about 90 per cent of capacity. As the industry usually operates at less than 100 per cent of capacity even in periods of high demand, it is expected to operate close to maximum possible

output in 1986. The projected level of shipments of market pulp by Canada in 1986 is equal to the capacity of the Canadian industry.

Shipments of

Chemical Paper Grade Market Pulp

From all producers to all markets except to Canada

(Thousand Tonnes)

<u>Market</u>	<u>Average 1969-1971</u>	<u>Average 1979-1981</u>	<u>1982</u>	<u>Forecast 1986</u>
United States	3,550	4,430	3,950	5,000
Western Europe	8,350	10,035	8,950	10,500
Japan	1,350	2,085	1,950	3,000
Africa and Asia	610	1,770	2,075	2,750
Rest of World	<u>960</u>	<u>1,730</u>	<u>1,470</u>	<u>1,750</u>
Total	14,820	20,050	18,395	23,000
Shipments by Canada to all markets	3,660	5,520	4,560	6,475
Canadian Share of Total	25%	27.5%	25%	28%

Some 800,000 tonnes of chemical pulp are exported annually to affiliated paper mills in the United States. This pulp is commonly referred to as tied pulp. The volume of shipments is expected to increase to about 950,000 tonnes in 1986 in line with the economic recovery and a relatively small addition to capacity. Beyond 1986 any increase in the volume of tied pulp shipments will be a matter of the attractiveness of Canada as a place to invest in pulp capacity.

(c) The Outlook for 1993

Because of conflicting trends in the production of paper and board in various regions of the world, and expected changes in the role that market pulp will play in the fibre supply of the paper industry, it has not been possible to make a forecast of the volume of market pulp shipments in 1993. In certain regions such as Japan, some other Asian countries and possibly some countries in Europe, market pulp is expected to comprise a larger percentage of the furnish for making paper as limitations on local wood supply develop. In others, particularly the large United States market, integration of pulp and paper manufacturing is expected to reduce the importance of market pulp. Further complicating factors are that the Nordic countries will supply a greater proportion of Europe's paper supply with the elimination of tariffs on

paper and board next year, and the expectation that United States exports of paper may increase. In some countries waste paper may provide a larger proportion of the furnish; in others, where the quality of paper is upgraded, a smaller share. Paper will likely be lighter weight and contain more fillers. Developments in electronic communications may affect the production of printing papers. Thus it is not possible to project with any certainty the tonnage of world market pulp in 1993. But with market pulp forecast at 23 million tonnes in 1986, and with production of printing, writing and tissue papers likely to grow by up to 10 or 12 million tonnes between 1986 and 1993, there is promise that there will be a growing market for pulp exports.

The role that Canada may play in this market is also uncertain. There will be strong competition from producers in the United States and from lower cost pulp produced from hardwoods in a number of countries. But the Nordic countries will likely produce less market pulp.

If the Canadian industry is able to reduce its costs and improve its competitive position, there will be a great opportunity to export more woodpulp, but if Canada is unable to do that, the additional pulp will be supplied mostly by others.

d) Exports of Other Grades of Pulp

Mechanical pulp exports, relatively small at 200,000 tonnes, are expected to increase substantially to a level of 600,000 tonnes as new capacity installed in Canada to supply pulp to a newsprint mill in the United Kingdom comes on stream later this year. There are many developments in new techniques for manufacturing mechanical pulp and pulp made with a combination of chemical and mechanical processes. It is possible that such pulp will find an increasing role in supplying paper making fibres in the future and export markets may develop. It is, however, too early to project specific volumes that may develop.

Dissolving pulp is now a minor product in the total pulp export picture and the closure of capacity will result in exports in 1986 being at about 250,000 tonnes, slightly above the 1982 level.

The Outlook for the Canadian Newsprint Industry

Canada sells newsprint world-wide in competition with many other producers in the world. It is, therefore, necessary to assess the current situation and likely developments in all markets and supply regions to evaluate Canada's prospects.

Canada has recently supplied about 37 per cent of the newsprint used in the world (not including Comecon countries). This percentage is down from 40 per cent in 1970. However, over 80 per cent of Canada's newsprint is sold in North America and developments on this continent are of crucial importance to the future of the Canadian newsprint industry.

In summary, Canadian newsprint shipments, which were depressed in 1982 because of the recession, are expected to increase by about 17 per cent by 1986 to reach a level of 9.5 million tonnes. The capacity of the Canadian industry will increase by 500,000 tonnes during the next three years. The operating rate, which was 81 per cent of capacity in 1982, will rise only to 90 per cent in 1986.

Consumption of newsprint world-wide is expected to continue to grow at a modest rate, about 2.5 per cent per annum, to reach a level of 32.5 million tonnes in 1993. Canada's shipments that year will, of course, be determined by the share of that market it will be able to attain, which in turn depends on supply of newsprint by other producers around the world and Canada's cost competitiveness.

World Consumption of Newsprint and Canadian Supply (ex Comecon Countries) Thousand Tonnes

	<u>World Consumption</u>	<u>Shipments by Canada</u>	<u>Canada as % of Total</u>
1969-71 Average	19,700	7 820	40
1979-81 Average	23,875	8 755	37
1982	23,259	8,075	35
1986 Forecast	27,350	9,475	35
1993 Forecast	32,500	-	-

Canadian Newsprint Shipments and Capacity Thousand Tonnes

	<u>Shipments</u>			<u>Capacity</u>	<u>Shipments as % of Capacity</u>
	<u>To North America</u>	<u>Overseas</u>	<u>Total</u>		
1980	7,095	1,525	8,620	9,130	91
1981	7,105	1,810	8,915	9,490	94
1982	6,550	1,525	8,075	9,935	81
1986 Forecast	7,750	1,725	9,475	10,500	90

a) Background and recent trends

Newspaper publishing is an old and now mature industry in the industrialized developed countries of the world. It probably achieved full penetration of potential markets some time ago and growth now depends on population growth, the number of households and growth in advertising expenditures, which in turn depends on the GNP. Thus, the overall rate of growth of newspaper publishing and of the consumption of newsprint in the developed countries has been relatively modest. For example, in the decade of the 1970s consumption of newsprint in the United States grew at a rate of 2 per cent per annum and in Europe at 1.8 per cent per annum. Consumption in Japan grew at a rate of 3.6 per cent per year. Consumption in many newly industrialized countries, in Asia and Latin America, has grown more rapidly. For example, consumption by countries in Asia, excluding Japan, grew at a rate of 7 per cent per year in the past decade.

In the three years 1979 to 1981, world consumption of newsprint (not including Comecon countries) was 23.9 million tonnes. Canada supplied 8.75 million tonnes or 37 per cent. While Canada's shipments grew by 1 million tonnes in the decade of the 1970s, its share of the world market fell from 40 per cent to 37 per cent.

From the above, it is clear that newsprint capacity in other parts of the world increased at a greater rate than in Canada in the 1970s. A large part of the increased capacity was installed in the southern United States to take advantage of abundant low cost wood in that area and proximity to large and growing markets.

Capacity was also added in certain developing countries. A new development in the decade was the emergence of some new exporters such as New Zealand, South Africa, and more recently Australia.

b) The outlook for newsprint shipments in 1986

The world-wide recession in 1982 caused a sharp drop in newsprint shipments by Canada, both to the North American market and to overseas markets. Canada's share of world markets fell to 35 per cent.

It is expected that economic recovery, which began at the start of this year in North America and will begin later this year in Europe, will continue through 1986. A long term rate of growth of real GNP used for estimates in this study is 3 per cent per year in North America, 2.5 per cent in Western Europe and 4 per cent in Japan. These rates are in line with estimates recently published by the Royal Bank of Canada and by Chase Econometrics.

Newsprint consumption is expected to recover in line with the recovery in overall economic activity. Thus, world newsprint consumption in 1986 has been forecast to be 27.4 million tonnes compared to 23.3 million tonnes in 1982.

While it is expected that Canada will participate in the growth of world consumption, the prospects for the Canadian industry in the different markets vary widely because of expected changes in capacity in a number of areas.

In North America, capacity in the United States will grow relatively slowly in the next three years with the installation of one newsprint machine. Canada should be able at least to maintain its share of the increased United States market and possibly increase it a percentage point or two. On the other hand, shipments to Western Europe, Latin America and Oceania are expected to decline slightly as substantial capacity is being added in those areas in the next few years. A United Kingdom mill which has been closed for several years is scheduled to re-open this year. An additional four machines will be installed in continental Europe and a fifth will start up in Finland this year. Thus, shipments to Europe are expected to decline slightly by 1986.

Similarly, for Latin America where new machines have started up in Argentina and Mexico and additional capacity is scheduled to be completed in Brazil and Mexico, imports of newsprint from Canada are expected to be lower.

Newsprint consumption in Japan is expected to grow, but most likely capacity there will not be increased or increased very slightly. Additional demands for newsprint will have to be met, at least in part from increased imports and Canadian shipments to that market are projected to rise to 200,000 tonnes by 1986. Other markets in Asia are also expected to require more imports, including imports from Canada.

In total, overseas shipments are projected to be 1.7 million tonnes in 1986. This represents an increase of 200,000 tonnes from the depressed level of 1982, but 100,000 tonnes less than the total reached in 1981.

Total Canadian shipments for 1986 are forecast to be 9.5 million tonnes, representing 90 per cent of industry capacity.

Canadian Shipments of Newsprint by Market Region

Thousand Tonnes

<u>Market</u>	Average	<u>1981</u>	Estimated	
	<u>1979-1981</u>		<u>1982</u>	<u>1986</u>
Canada	985	1,045	935	1,100
United States	6,185	6,060	5,615	6,650
United Kingdom	460	540	540	450
Other Western Europe	185	190	170	200
Latin America	530	625	470	425
Japan	15	15	10	200
People's Republic of China	55	85	35	50
Other Asia	230	260	195	300
Africa	5	-	40	50
Oceania	105	95	60	50
Total	8,755	8,915	8,075	9,475

c) Outlook for newsprint consumption for 1993

World newsprint consumption is expected to continue to grow into the next decade, although the trend of consumption may be affected by new developments. In the developed countries, it can be expected that consumption will grow at rates somewhat less than the rate of growth of GNP. Thus, consumption will grow at rates between 2 and 3 per cent per annum, varying from country to country.

However, in these countries the possibility of increased competition from electronic communications now being developed must be considered as a possibility in the 1990s. Technology now exists for the dissemination of a wide variety of information by means of electronic networks, using both passive systems and inter-active systems. While technically feasible, these systems have so far had no commercial impact and it is the consensus that their adoption will proceed very slowly. It is, however, believed that they will begin to have an impact on print media in the 1990s. To reflect this possible development, the level of consumption in the advanced economies of the world in 1993 has been reduced by 3 per cent from the projected level.

Higher rates of growth of newsprint consumption are expected in many developing countries. A number of countries have been developing their industrial bases in the past decade and they, along with other countries which will begin this process, will show high rates of economic growth in the coming decade. One manifestation of this growth is higher consumer expenditures, increased circulation and size of newspapers, and consequently high rates of growth in newsprint consumption.

Thus, Latin America, Asia and certain countries in Africa will show rates of growth in newsprint consumption, considerably higher than those in the developed countries.

Taking the world as a whole, it is estimated that newsprint consumption will grow at an annual rate of 2.5 per cent per annum between 1986 and 1993, when it will reach 32.5 million tonnes. As noted above, Canada's share of the world total in 1982 was 35 per cent and is expected to remain at 35 per cent in 1986. Canada has lost share recently partly because it was not cost competitive for the installation of newsprint capacity in the late 1970s. If Canada is to maintain its share of future newsprint markets, it will have to attract the necessary capital investment and will be able to do so only if its cost competitiveness can be improved.

World Newsprint Capacity and New Machines^{1/}

	<u>Thousand Tonnes</u>		
	1983 Capacity	Number of New Machines ^{2/} <u>1983-87</u>	Additional Capacity ^{2/}
Canada	10,100	2	400
United States	<u>5,220</u>	<u>1</u>	<u>200</u>
Sub Total -	15,320	3	600
Scandinavia	4,660	1	140
Other Europe	2,550	5	730
Latin America	680	4	400
Japan	2,950	0	0
Other Asia	1,780	2	100
Africa	450	2	120
Oceania	<u>710</u>	<u>1</u>	<u>180</u>
Sub Total -	13,780	15	1,670
TOTAL -	<u>19,100</u>	<u>18</u>	<u>2,270</u>

1/ Not including Comecon countries.

2/ Includes only machines and additional capacity considered to be definite. The figure for additional capacity is net, that is, machine closures that have been announced have been taken into account. It is possible that additional old and small machines will be closed down.

Uncoated Groundwood Printing Paper

The expectation is that demand for Canadian-produced uncoated groundwood printing paper will increase fairly significantly between 1983 and 1993. This increased demand will be mainly concentrated in North America although some possibility for increased offshore exports exists, particularly for directory grades.

In North America, it appears unlikely that any new groundwood machines will be installed in the southern United States in the near future. There are, apparently, still some problems in adapting southern U.S. fibre to the production of groundwood grades with good printability characteristics. Undoubtedly, these problems will be overcome but for the moment the fibre available in the southern U.S. will probably be used for the production of other grades. The opinion of the Committee is that demand for Canadian-produced uncoated groundwood printing paper will grow by 5-6 per cent between now and 1986 and by 3-5 per cent from then until 1993.

The projection of demand in the following table has been made using an annual growth rate of 5 per cent from 1982 to 1986, and 4 per cent from that year until 1993.

Uncoated Groundwood Printing Paper
Thousand Tonnes

<u>Year</u>	<u>Capacity*</u>	<u>Production</u>	<u>Shipments</u>		<u>Demand On Canadian Mills</u>
			<u>Domestic</u>	<u>Export</u>	
1972	500	428	63	368	431
1973	550	285	68	221	289
1974	410	365	80	283	363
1975	455	281	68	218	286
1976	455	330	70	258	328
1977	510	420	84	333	417
1978	565	492	81	407	488
1979	590	567	104	464	568
1980	660	615	96	517	613
1981	660	645	108	523	631
1982	750	649	98	546	644
1983					675
					(estimated)
1986					780
					(projected)
1993					1,030
					(projected)

*Because some machines which are primarily used to produce newsprint are also used to produce uncoated groundwood paper, the potential capacity for uncoated groundwood printing paper may exceed the capacity figures shown above.

Uncoated Woodfree Book and Writing Paper

It is recognized that the penetration of groundwood printing papers into some of the traditional markets for woodfree book and writing papers could have an adverse effect on these grades. Additionally, there are a variety of opinions on the effect of the electronic "revolution" on the demand for paper. Finally, U.S./Canada exchange rate relationships on the demand for these products from Canadian mills are of crucial importance.

Basically, this is a domestic sector, not competitive with the outside world on the basis of its present structure. However, over the years, the relationship between growth in demand for these grades, in both Canada and the United States, and growth in GNP has been fairly consistent. In the U.S., demand growth has usually been about 0.5 per cent to 1 per cent higher than GNP growth. In Canada, demand growth has generally been about the same as GNP growth. Opinions expressed by Canadian producers indicate that this relationship is expected to continue to apply to demand for their product over the next few years.

Accordingly, in the following table, the demand for uncoated woodfree grades of book and paper from Canadian mills has been projected to increase by 3 per cent per annum from 1983 to 1993. The figure of 3 per cent is also a rate being used to forecast GNP growth in Canada and the United States over the next few years.

Uncoated Woodfree Book and Writing Paper

(Thousand Tonnes)

<u>Year</u>	<u>Capacity</u>	<u>Shipments</u>		<u>Demand On Canadian Mills</u>
		<u>Domestic</u>	<u>Export</u>	
1976	625	332	93	425
1977	635	403	144	547
1978	665	493	134	627
1979	710	554	146	700
1980	750	554	139	683
1981	785	508	113	621
1982	775	501	139	640
1983	790			660 (estimated)
1984	865			
1985	920			
1986	950			720 (projected)
1993				885 (projected)

Linerboard

During the period 1972-1981, demand for Canadian produced linerboard increased at an annual rate of 2.9 per cent. This is about one-half the growth rate experienced during the previous decade.

In general, we believe that demand for this product will continue to increase over the next ten years. However, there is some difference of opinion as to the size of the increases, particularly for domestic demand, which takes up more than 75 per cent of the Canadian supply. Some are of the opinion that demand growth in Canada will continue its historical trend of closely following GNP growth. Others feel that lower cost imports of finished boxes and linerboard, as well as the increased use of competitive materials, will result in a lower growth rate.

On the export side, Japan and some South East Asian markets can offer some opportunities for increased Canadian shipments of kraft linerboard. However, competition from lower cost southern U.S. producers could seriously affect not only Canadian producers' ability to share in this potential new demand, but also their current position in all off shore markets. It should be noted that over the last five years, two Canadian export-oriented kraft linerboard mills, having a combined annual capacity of about 450,000 tonnes, have closed.

It appears unlikely that there will be any investment in new kraft linerboard operations in Canada, at least during the next ten years. Therefore, any increase in domestic demand is likely to be met by a reduction in exports, and modernization of existing mills.

Bearing all this in mind, demand for Canadian linerboard, as shown in the following table, has been projected to increase by 3 per cent per year from 1983 to 1986 and 2 per cent per year from 1986 to 1993.

Linerboard
(Thousand Tonnes)

<u>Year</u>	<u>Capacity</u>	<u>Production</u>	<u>Shipments</u>		<u>Canadian Mills</u>
			<u>Domestic</u>	<u>Export</u>	
1972	835	830	645	185	830
1973	1,140	974	677	297	974
1974	1,270	1,094	726	358	1,084
1975	1,330	722	520	198	718
1976	1,450	950	633	271	904
1977	1,420	1,029	696	332	1,030
1978	1,215	1,024	757	301	1,060
1979	1,215	1,074	812	254	1,076
1980	1,220	1,176	820	345	1,168
1981	1,260	1,086	816	256	1,075
1982	1,150	888	679	220	900
1983	1,160				930(estimated)
1984	1,210				
1985	1,220				
1986					1,015(projected)
1993					1,170(projected)

Kraft Papers

The current long-term outlook for Canadian-produced kraft papers is not optimistic. This is particularly true for the unbleached grades.

Demand for the unbleached commodity grades, about 80 per cent of total Canadian kraft paper production, has been declining steadily over the last five years. The main reason is the inroad made by plastics in those markets where, historically, the packaging components were largely unbleached kraft paper, i.e. multiwall sacks, grocery bags, wrapping, etc. In Canada, this trend is expected to continue, thereby further eroding kraft papers' position in the packaging market. Another reason for the decline is the increasing competition in the domestic market from U.S. paper and bag producers. U.S. exports of these products to Canada have increased in recent years.

During the last five years, three machines have been converted from unbleached kraft grades to other grades. Total combined capacity loss was 80,000 tonnes.

While there may be some potential for increased short-term demand in the export market, particularly in developing countries, the long-term outlook for unbleached kraft papers remains bleak. Plastic bags are currently being introduced into the U.S. market on a large scale, possibly eliminating any future prospects Canadian producers may have had in that market.

In summary, total demand for Canadian-made kraft packaging papers is expected to decline slightly over the next ten years. The projections on the following table show a 2 per cent per year increase in demand to 1986 as a result of economic recovery in North America. From 1986 to 1990, demand is expected to decline by 1 per cent per year, followed by a more rapid decline of 3 per cent per year to 1993. The gradual decline from 1986 to 1993 reflects the greater penetration by plastics into the Canadian bag and sack market.

Kraft Papers
(Thousand Tonnes)

<u>Year</u>	<u>Capacity</u>	<u>Production</u>	<u>Shipments</u>		<u>Total Demand on Canadian Mills</u>
			<u>Domestic</u>	<u>Export</u>	
1972	570	517	322	192	514
1973	600	565	317	254	571
1974	640	594	358	229	587
1975	640	399	235	154	389
1976	625	479	269	208	477
1977	620	519	274	243	517
1978	620	580	316	277	593
1979	620	586	341	241	581
1980	560	533	292	241	532
1981	570	490	283	207	490
1982	530	454	235	218	453
1983	540				470(estimated)
1984	550				
1985	550				
1986					500(projected)
1990					480(projected)
1993					435(projected)

APPENDIX IB

TRADE OUTLOOK - WOOD PRODUCTS

TABLE OF CONTENTS

	<u>Page No.</u>
1. SOFTWOOD TIMBER SUPPLY/DEMAND OUTLOOK	I-20
2. SOFTWOOD LUMBER SUPPLY	I-23
3. SOFTWOOD LUMBER DEMAND	I-26
4. PLYWOOD	I-34
5. WAFERBOARD	I-36
6. SHINGLES AND SHAKES	I-38

1. SOFTWOOD TIMBER SUPPLY/DEMAND OUTLOOK

The level of economic activity during the next decade will be much slower than during the 1970s. Inflationary pressures are expected to be less and all wood products will be in abundant supply. The economy will be driven more by moderate consumer demand. In fact, production capacity will be under utilized throughout the 1983/1993 period. Marketing of standard construction material will be highly competitive. Efficient operations located close to the principal consuming areas will have a significant advantage. Less efficient operators and/or those geographically dislocated from principal consuming areas will face more difficult times, particularly on the downward cycles.

The current and projected world supply/demand balance of softwood industrial roundwood is as follows:

	Millions of Cubic Metres						
	1970	1978	1979	1980	1981	1985	1990
Total roundwood (all species incl. fuelwood)	2,640	3,020	3,095	3,159	3,143	N.A.	N.A.
Total industrial roundwood, all species	1,278	1,415	1,445	1,442	1,384	1,588	1,695
Industrial roundwood, soft- wood	911	982	1,006	990	944	1,091	1,158
Sawlogs, (incl. veneer logs, all species)	750	880	886	867	804	971	1,025
Sawlogs (incl. veneer logs) Softwood	550	629	635	612	562	682	716

Source: Food and Agriculture Organization
Council of Forest Industries of British Columbia

Of greater interest perhaps, is the geographical distribution of the changes expected to take place in the supply and demand pattern for softwood saw logs. Comparing the former peak year of 1979 (635 million cu.m.) with the forecast for 1990 (716 million cu.m.) the following pattern is anticipated:

A. Softwood Saw Log Supply

	Million Cubic Metres			
	1979	1990	Change	
	Volume	Volume	Volume	%
U.S.A.	189.2	183.3	- 5.9	- 3.1
U.S.S.R.	129.9	177.9	+ 48.0	+37.0
Canada	109.1	115.1	+ 6.0	+ 5.5
Scandinavia	46.0	47.7	+ 1.7	+ 3.7
Other Europe	75.0	76.2	+ 1.2	+ 1.6
China	21.2	30.6	+ 9.4	+44.3
Japan	18.1	20.3	+ 2.2	+12.1
Latin America	25.7	34.4	+ 8.7	+33.8
Oceania	7.1	11.3	+ 4.2	+59.1
Africa, Middle East, S.E. Asia	<u>13.8</u>	<u>19.2</u>	<u>+ 5.4</u>	<u>+39.1</u>
World	635.1	716.0	+ 80.9	+12.7

Source: FAO and COFI

Whereas the softwood roundwood supply is expected to increase some 12 per cent during the period 1979/1990, approximately 75 per cent of this increase will occur in Russia and China, none of which is expected to find its way into the international market for solid wood products. As a result, it is forecast that there will be a relatively stable supply (increasing only 5 per cent) from the rest of the world during the decade.

The 'big three' Canada, U.S.A. and Russia will continue to produce some two-thirds of the world's softwood sawlogs as indicated below:

	U.S.A.		Canada		U.S.R.		Total Big 3		World	
	mns cu m	%	mns cu m	%	mns cu m	%	mns cu m	%	mns cu m	%
1979	189.2	30	109.1	17	129.9	20	428.2	67	635.1	
1980	183.3	26	115.1	16	177.9	25	476.3	67	716.0	

B. Softwood Sawlog Demand

In the overall world picture, and ignoring log inventories, demand is assumed to equal supply. However, on a country by country basis, there will be some variations due to international trade in logs. In 1979, some 31.9 million cubic metres or 5 per cent of total supplies were traded. The U.S.A. accounted for 54 per cent of the exports, while the U.S.S.R. was responsible for 24 per cent, European

inter-trade 11 per cent, and New Zealand 4 per cent. In 1981, the total trade was 23 million cu.m., or 4 per cent of supplies. The softwood log trading pattern is expected to change as follows:

MAJOR LOG EXPORTERS
(Millions of cubic metres)

	<u>1979</u>	<u>1990</u>
U.S.A.	17.1	9.0
U.S.S.R.	7.7	10.6
Latin America	1.0	1.7
Oceania	1.2	1.8
All Other	4.9	1.0
Total	<u>31.9</u>	<u>24.1</u>

MAJOR LOG IMPORTERS
(Millions of cubic metres)

	<u>1979</u>	<u>1990</u>
Japan	21.0	17.3
Europe	5.2	2.3
Korea	2.1	2.5
Canada	1.9	1.1
China	.4	.6
All Other	1.3	.3
Total	<u>31.9</u>	<u>24.1</u>

As will be seen, U.S. exports are expected to drop off considerably, partly to make up the U.S. shortfall in production for domestic consumption and partly to increase domestic market share of lumber. It should be noted also that China's demand could increase substantially beyond these forecasts.

After adjusting for exports/imports, the domestic demand picture for softwood sawlogs becomes:

	<u>1979 Volume</u>	<u>1990 Volume</u>	<u>Change</u>	
			<u>Volume</u>	<u>%</u>
U.S.A.	165.1	174.3	+ 9.2	+ 5.2
U.S.S.R.	122.2	167.3	+45.1	+36.9
Canada	111.0	116.2	+ 5.2	+ 4.7
Japan	39.1	37.6	- 1.5	- 3.8
Europe	126.2	126.2	-	-
China	21.6	31.2	+ 9.6	+44.4
Latin America	24.7	32.7	+ 8.0	+32.4
Oceania	5.9	9.5	+ 3.6	+61.0
All Others	19.3	21.0	+ 1.7	+ 8.8
Total	<u>635.1</u>	<u>716.0</u>	<u>+80.9</u>	<u>+12.7</u>

As will be seen, the Big 3 also dominate the demand scene with 63 per cent of world total in 1979 and 64 per cent in 1990.

2. SOFTWOOD LUMBER SUPPLY

As indicated, the level of growth in production of softwood lumber will be governed by world demand which is expected to increase a modest 9 per cent by 1990 over 1979 levels. This represents an average growth rate of less than 1 percent per year. Most of the potential for increased production and consumption is in Russia and therefore production of softwood lumber in the rest of the world will remain very steady due to limited demand and a limited economically viable timber supply.

Canada - Canadian production of softwood lumber is expected to reach about 21 billion board feet in 1990 up from 18.3 billion board feet in 1980. This average annual increase of 1.4 percent compares with 5.3 percent in the decade before 1980, reflecting the long-term shifts in North American consumption and production. The high rate of growth during the 1970s can largely be attributed to historically high levels of housing activity in North America and, on the supply side, the significant expansion of sawmill facilities in the B.C. Interior and Central Canada. These factors will not be present in the 1980s.

Some further growth of softwood lumber production will take place in Alberta. Eastern Canadian production will remain stable and B.C. mills will only slightly exceed their 1978/1979 levels of production. Prices are still not expected to be high enough to justify harvesting of some of the more marginal timber.

Canada currently accounts for some 11 per cent of total world production of softwood lumber and this is expected to remain relatively stable during the next decade. However, unlike other major producers, Canada exports some 70 per cent of its production and accounts for approximately 45 per cent of all international trade in softwood lumber. This heavy dependence on international trade will continue and therefore currency exchange rates will remain a major concern to Canadian producers. In recent years, Canadians have lost a substantial market share in most principal overseas markets, particularly in Europe, North Africa and the Middle East, because of the strong U.S. dollar and the drag effect it has had on the Canadian dollar. In many cases, Canadians are today achieving all time record prices for export sales in local currencies but due to unfavourable exchange rates, there are

unsatisfactory FOB mill prices in Canadian dollars. It is projected that the Canadian dollar will continue to hover in the 81¢ to 85¢ range relative to the U.S. dollar during the 1983/1993 period. It is expected that several of the key overseas currencies, particularly the pound, deutsche mark and the yen, will strengthen somewhat and therefore restore, in part, Canada's ability to compete internationally.

Russia - It is very difficult to get an accurate reading on Russia. Opinions vary widely. Russia has an extensive forest resource but also faces many difficulties in developing that resource. It is very expensive to develop those regions that contain the forests; there is difficulty in allocating the necessary capital resources and in getting people to move to the various growing regions because of the severe climate.

Any increase in softwood lumber production would be in eastern Russia rather than the west. Softwood lumber production could conceivably be increased by 15 per cent over 1979 levels by 1990 to approximately 95 million cubic metres. Domestic needs however, are such that almost all this would be consumed internally. The small incremental volumes for export would not likely find their way into western Europe but rather would be consumed in the Soviet Bloc countries. There is some potential for exports to China, probably in the form of logs.

United States - Production of softwood sawlogs in the U.S. is expected to decline slightly from 1979 levels during the period 1983/1993. Consumption of softwood sawlogs however is expected to increase slightly with the result that fewer logs will be available for export.

Lumber production is expected to return to 1979 levels by 1985 which would represent a 35 per cent increase over the reduced levels of 1982. Production would be expected to remain at that level or show a slight increase during the period 1985/1993.

Within the U.S. there will be some increase in southern pine production and steady, or perhaps slightly declining production, in the west. The U.S. west Coast mills will face economic pressures similar to the B.C. Coast mills. High logging costs will make it difficult to compete with interior and southern based dimension mills and there will be a growing awareness and interest by the Coast mills in pursuing higher value international markets, particularly Japan.

No major shift in timber supply is expected from other countries during the next decade. Scandinavia has little or no increase potential. Europe could show some movement towards more self-sufficiency, but the potential for increased production is small and is unlikely to meet the slight increase in consumption.

In the Pacific Rim, New Zealand will become a major competitor with Canada when its plantation timber matures. Production of softwood lumber could increase from 1.5 billion feet to 6.0 billion feet annually. However, this is not expected to start until the late 1990s.

Plantation timber from Chile will also find its way into the world market but more in the form of logs which will partly offset Japan's shrinking supply.

Japan has the potential to produce more lumber from domestic supplies but the growth potential would come in the late 1990s. Japanese timber will be expensive and generally non-competitive with imports and Japan will continue to import more than 50 per cent of their timber requirements. Domestic softwood lumber production is expected at best to remain stable during the period 1983/1993.

South African plantation timber is nearing the stage when it could start to export lumber, but volumes will be negligible throughout the decade.

3. SOFTWOOD LUMBER DEMAND

Historically the demand for softwood lumber has been largely dependent on residential construction. New home construction has been the single largest user of softwood wood products but it has also been the most volatile market for lumber. Other uses such as industrial applications have consumed less wood but have tended to be much more stable. During the next ten years, relatively strong residential housing markets are anticipated during the 1980s but start to decline during the 1990s because of basic demographics. Fortunately, a corresponding increase in industrial uses that maintains overall consumption levels and perhaps brings more stability to the industry is anticipated.

Canada - In Canada, residential construction activity was greatly reduced by the combination of high interest rates and the economic recession in 1982. Federal and provincial housing programs and a moderation in interest rates will likely result in a housing start total of 155,000 units in 1983, up from 126,000 in 1982, but still considerably below the 1976 peak of 273,000. Housing trends in Canada will parallel those in the U.S. A reservoir of pent-up demand will ensure relatively strong housing markets during the mid 1980s, but declining demographic factors will suppress residential construction activity by the early 1990s. Canadian housing starts will likely average between 190,000 and 200,000 units in 1985 to 1990, down from the average 223,000 level of the 1970s. Housing starts are expected to decline to 150,000 to 160,000 units per year during the early 1990s.

Canadian consumption of softwood lumber will increase modestly from 5.7 billion feet in 1979 to 6.5 billion feet by 1993. Increased industrial construction is expected to offset any decline in residential housing. Imports during the period are expected to remain steady at approximately 4 million feet annually.

United States - In the U.S., recent forecasts of housing starts for 1983/1984 have been revised upward to 1.7 million units, compared to the severely depressed level of 1.0 million units last year. There is considerable debate on the future direction of U.S. housing for the rest of this decade.

The current demographic boom will end by the late 1980s and we will not enjoy the same level of new housing starts as we had the high lumber demand levels during the 1970s. New housing starts, while remaining cyclical, are expected to be reasonably strong through the 1980s, averaging 1.6 to 1.7 million units annually. This is due mainly to pent-up demand and a generally improving economy.

U.S. housing starts are expected to decline during the early 1990s to an average level of 1.3 to 1.5 million units. Softwood lumber consumption in new residential construction will decline from some 40 per cent of total consumption to approximately 30 per cent by 1995.

Declining consumption by the housing industry will be offset fully by an increase in industrial uses such as packaging, pallets, panelling etc. Home renovations are also expected to be a growth area.

The trend in house sizes remains a question. The trend to multiple housing is also uncertain. Affordability is a key factor along with an aging population. If there is a trend to smaller houses, it will be slow and gradual. No major shifts are anticipated in the 1980s.

Within the U.S.A., the south and south western regions will account for most growth in consumption as they will continue to be most popular for industry relocation, second homes and retirement. The north east and north central regions will be the weakest markets as a result of these migratory trends and because of economic reversals such as those facing the auto industry.

U.S. lumber consumption is expected to average 38 to 39 billion FBM per year for the balance of this decade. This would represent a 3 to 5 per cent increase over the average levels during the period 1976 to 1980. There is expected to be at least one economy downturn during the period under review with resultant weakened demand. Average consumption through the 1990s is forecast to increase a modest 1 or 2 per cent.

The U.S.A. will continue to be Canada's number one market for lumber. Demand in the U.S.A. will continue to exceed their domestic production, however the growth rate in production will be greater than that of total consumption with the result that the Canadian market share will be reduced.

Canadian shipments to the U.S. market will still average approximately 10.5 billion feet annually during the period 1984/1990. This compares to average shipments of 10.0 billion feet during the past seven years and is still short of the record 11.5 billion feet shipped in 1978. Canadian market share is expected to shrink to 27 or 28 per cent compared to a 31 per cent achieved in 1982.

Canadian mills will face strong competition in the U.S. during the period under review due to weak demand in the north east and north central markets, a significant transportation disadvantage in reaching principal consuming areas, and more rapidly increasing production costs in Canada.

Japan - The demographics in Japan are even less favourable than those in the U.S. There will be a steady decline in housing starts over the next 10 years. 1983 starts will be approximately 1.1 million units, down from the 1.9 million peak of 1979. Housing starts are expected to range from 1.2 to 1.4 million per year for the balance of this decade and then decline a further 10 to 15 per cent during the 1990s.

There has been a steady decline in the market share of wooden houses from 67 per cent in 1975 to 55 per cent this year due primarily to the growth of prefab and high-rise construction.

The growth of platform frame construction will help arrest the decline in wooden housing. PFC currently only accounts for 2 per cent of housing starts but this is expected to grow to 5 per cent by the late 1980s trending ultimately to a maximum of 10 per cent. There is considerable growth potential for PFC in three-storey apartments if code restrictions can be overcome.

The Japanese housing problem is not one of quantity but rather one of quality. Despite tremendous efforts and the high level of construction during the past 15 years, approximately 20 per cent of Japanese housing stock of 35 million units is still considered to be below minimum standards. Also, the life expectancy of much of the existing stock is less than 30 years, with the result that there is a large and expanding renovation market developing. Currently, annual expenditures on renovation, remodelling and repairs is one-third that spent on new housing.

Industrial and general construction activity is expected to offset some of the decline in residential housing. Total consumption of softwood lumber therefore is expected to remain steady at 1979 levels, i.e. 36 million cubic metres annually until 1985. A slight decline of up to 5 per cent may take place during the 1990s.

Whereas consumption of lumber will remain relatively stable, there will be some significant changes in supply.

- Little to no increase in domestic supply before the 1990s.
- Sharp decline in imports of South East Asian logs due to log export restrictions, increased competition and an upward trend in log prices. This will be offset, in part, by more imported South East Asian plywood and lumber.
- Russian supply of logs will remain steady. Despite the potential to increase log exports, the desire and ability to do so is not there. China may well syphon-off any potential increased supply for Japan.

- Gradual decline in U.S. log shipments due to increased demand in the U.S. and declining availability of privately owned old growth timber. Some of the imported U.S. logs will likely start to be used by the Japanese plywood plants to augment South East Asian logs. This will tend to lessen the supply to Japanese sawmills. Some increase in log imports from Chile is anticipated but they will be far less than the decline in U.S. logs.

As a result of these developments, there will be a definite trend towards the import of manufactured products. In 1976, lumber accounted for only 7 per cent of the total log and lumber imports. This grew to 11 per cent in 1981. Eighty per cent of the lumber imports are softwood, and to date Canada is supplying approximately 55 to 60 per cent of the softwood lumber.

Imports of softwood lumber are expected to show a steady and significant growth during the next decade. Import volumes could double during this period for an annual increase of 3 to 4 million cubic metres. Canadian market share of the imported softwood lumber will drop somewhat due to increased competition from U.S. and other suppliers. Canadian shipments by the end of this decade could reach 1.8 billion feet, a significant improvement over the previous record level of 1.1 billion feet achieved in 1980.

Europe - Growth in consumption of softwood lumber is expected to average less than 1 per cent per year during the next decade unless there is some major structural adjustment such as a platform frame housing breakthrough. The EEC consumption of softwood lumber was 39 million cubic metres in 1980 and this is expected to increase to 41 million cubic metres by 1990.

Principal growth in consumption will be in the southern regions in Italy, France and Spain, where there will be a stronger demand for housing, and in the U.K. where consumption is expected to return to the 1978/1979 levels. Consumption in northern regions of the continent may decline slightly.

A recovery in the U.K. economy is expected to provide improved softwood lumber consumption. There is a shortage of suitable housing that will result in increased housing activity. The recovery of the public housing sector would add considerable stimulus to timber consumption and particularly to PFC.

Russia and Scandinavia are expected to remain the major suppliers but no increase in supply is anticipated. Both will continue to diversify markets away from Western Europe by increasing sales to North Africa and the Middle East. Within the EEC, there are national attempts to reduce import

dependency. EEC production, particularly in France, can be increased at least sufficiently to offset any growth in consumption.

Timber frame construction is well established in the U.K. where it now accounts for some 30 per cent of housing starts. There is also excellent potential in France where the Government policy is to encourage the adoption of timber frame construction to help their domestic industry. Development of timber frame construction in other markets, such as Italy, will be slow. Canada can expect some competition for construction grade lumber in timber housing from Sweden and from the southern yellow pine mills of the U.S.A.

Canadian shipments to continental Europe are expected to remain stable. There is some potential for increased shipments to the U.K. Assuming there will be some strengthening of the key European currencies, Canadians should regain most of the market share lost during the past 18 months. In total, shipments will return to near 1978/1979 levels. Currency will definitely be a determining factor, particularly in light of recent devaluations by Sweden and Finland. The U.K. will continue to be the major market for Canadian wood in Europe.

Middle East - The Middle East markets currently consume approximately 4.7 million cubic metres of softwood lumber annually, an increase of 60 per cent since 1973. Despite this growth, earlier expectations for Canadian shipments to these regions were exaggerated. Political instability has slowed growth and consumption. Specifications have proven difficult for Canadian mills, particularly metric lengths.

During the next decade, a further increase of 25 per cent can be realized bringing the regions' consumption to 5.8 million cubic metres. However, there is considerable uncertainty.

- Iraq and Iran could both have substantially increased consumption levels for wood products if political stability can be achieved. Both have large populations and will face major rebuilding programs.
- Saudi Arabia has over-built. Consumption is expected to decline dramatically.
- Lebanon will face a major rebuilding program when political stability is restored. This will result in increased lumber consumption, but it will likely be supplied by Russia and European suppliers.

- Egypt has a large and expanding population. Major rebuilding programs are required which, if undertaken, will result in significantly increased timber consumption. This however would appear to be dependent on a strengthening of the Egyptian economy or substantial aid from other Arab States. Both are questionable.
- Israel represents a small demand market.

Canadian shipments to the area are forecast to increase based largely on the growth potential of Egypt.

North Africa - The North African region, particularly Algeria, Morocco, and Tunisia offer good growth potential. There are phenomenal population growth rates, reasonably stable governments and quite healthy economies driven by the oil industry.

Major building programs are required to meet the needs of an expanding population to rebuild structures damaged by earthquakes, tidal waves, etc.

Consumption has increased only 15 per cent from the 1.4 million cubic metres in 1973 to 1.6 million cubic metres in 1980. However, consumption is expected to double by 1990 to 3.2 million cubic metres.

Canadians currently enjoy a 25 per cent market share and this is expected to increase slightly during the next decade to perhaps 30 per cent.

Other Countries

Australia has been a constant market for Canadian specialties, i.e. fir cuttings and Western Red Cedar. Shipments from Canada have averaged 130 million feet during the past 7 years. B.C. shipments of Western Red Cedar, which is not available from Australian sources, are expected to remain stable during the next decade.

Shipments of fir cuttings will decline slightly during the same period as domestic and New Zealand supplies increase and the availability of large fir cuttings from B.C. decreases.

China is a large potential market. It has a population of one billion people and a softwood lumber consumption of only 13 million cubic metres per year; almost identical to Canadian domestic consumption. It is doubtful whether China's forests are capable of supporting a higher level of softwood saw log production.

China is currently involved in major rebuilding programs in many of the principal industrial centres. There is a large need for wood products and this has resulted in some imports despite a policy of self-reliance. There is a strong preference for logs but some lumber has been purchased.

Future import levels are totally unpredictable and are not only dependent on government policy but also on the availability of foreign currencies. To date, buying has been highly opportunistic but of sufficient volume to indicate an ongoing potential.

Canadian lumber shipments, which are currently less than 50 million feet per year, could more than double during the next decade. The demand is there - a stable long-term purchasing policy is not. China has recently made major log purchases from the U.S. and Russia, and if this continues, it could have a major impact on the availability of logs for other key markets, i.e. Japan, Korea, etc.

Korea offers some potential for Canadian lumber products, primarily in housing. There is a shortage of housing in Korea; only 6 million units for a population of 39 million people. Priority is being given to the housing industry. Two and one half million residential units could be built during the next 10 years, which would be approximately twice existing levels of construction but still only half as many as the government had planned to build during this period.

Building methods are concrete and brick but there is considerable interest in Platform Frame Wood Construction because of cost, speed of construction and energy efficiency; more than 50 per cent of Korea's imports are energy related take; Korea has a wood products industry but it is largely dependent on imported logs from S.E. Asia and the U.S.A. Any lumber used for timber housing would have to be imported.

Mexico represents a long-term potential for softwood lumber. It faces severe housing shortages. There is a need for both residential and non-residential construction but the level of activity will be tied directly to a recovery of the domestic oil industry. This is at least 5 years away.

Puerto Rico is an important market for Canadian shippers, consuming 50 to 70 million feet of Canadian lumber annually. This is mostly low grade material for general construction.

Cuba is currently a small market. It has a high demand for wood products but has rigid currency controls. Cuba's ability to pay is also a concern. Purchases from Canada in the past have been very irregular and this is expected to continue.

South America has a large, fast growing population and should be a large consumer of lumber products. However, economies generally are weak and consumption levels very low. Except for softwood log exports from Chile, no major changes in imports or exports from the region are expected.

Venezuela has some potential for increased consumption but currently faces strong import and currency controls. It is dominated by U.S. suppliers who have an insurmountable transportation advantage.

Peru has a limited housing potential, perhaps on a turn-key basis initially. Domestic forests could be developed over time to meet these demands but Peru has internal transportation problems, i.e. the forests are east of the Andes and the heavily populated areas are on the west side. This could create an opportunity for imported material that warrants investigation.

Chile has its own forest industry that is currently exporting softwood logs to Japan and lumber to the Middle East and there is little potential for Canadian lumber shipments.

4. PLYWOOD

About 90 per cent of the plywood made in Canada is made from softwood species. Softwood plywood is primarily a structural material suitable for construction, industrial, agricultural and utility purposes. It has a high strength to weight ratio, stability and well defined physical and mechanical properties. All Canadian production is made with an exterior, fully water-proof glue bond and is recognized as a premium product in Canada and abroad.

Some higher grade sanded panels are used where appearance and surface smoothness are important but demand is declining as the quality of available logs falls off, production costs increase and overlaid panels displace sanded panels in one of the major end uses, concrete forming.

The softwood plywood industry consists of 16 companies operating 28 mills, of which 22 are located in British Columbia. These mills account for 85 per cent of Canadian production. The remaining 15 per cent is produced by 3 mills in Alberta, 1 in Saskatchewan, and 2 in Ontario. About 9,000 workers are employed.

Total shipments in 1980 were 2.7 billion square feet (3/8" basis) with a value exceeding \$500 million. About 21 per cent was exported principally to the EEC and Japan. Shipments to the USA were negligible. Considering raw material supply, cost of production, remoteness of market, etc., all indications are that the volume of plywood produced by the industry will remain static for the next few years. Sanded grades will decrease; sheathing, overlaid, specialties, and select grades will increase slightly.

In Canada, the rapid growth of the waferboard industry, which utilizes low cost aspen as a raw material and a production process requiring minimal labour content, is challenging the dominance of softwood plywood in the construction panelboard market. Waferboard plants are closer to the large eastern markets and enjoy freight and other advantages that will make it difficult for plywood manufacturers to hold some of the markets they have developed. There will, however, continue to be substantial markets for softwood plywood but healthy survival of the industry will depend on improved productivity and increasing export volumes at competitive prices.

The Canadian industry has been developing overseas markets for many years and has been successful in removing, or modifying, many of the code restrictions and specifications that previously impeded the acceptance and use of softwood plywood in Europe and Japan. There is still work to be done but the demand for softwood plywood will continue to increase in the U.K., Benelux, Netherlands, Germany, France, Scandinavia, and Japan.

Competition from U.S. producers has been intense but there is evidence that the increased supply and greater availability of U.S. plywood in the EEC have led to an overall market growth. U.S. promotional efforts should also supplement Canadian activities and further expand these markets for Canadian plywood.

Challenges facing the Canadian industry if it is to remain viable are:

- To retain a Canadian market for all applications for which the performance of softwood plywood is superior to waferboard and oriented strand board;
- To meet American competition in the EEC and Japan;
- To develop markets in overseas areas such as China and the Middle East;
- To remove quota restrictions on duty-free plywood entering the EEC;
- To facilitate certification and testing of Canadian plywood for use in Japan;
- To reduce the prohibitive and punitive tariff on softwood plywood entering Australia;
- To improve code acceptances for Canadian plywood in Scanadinavia; and
- To make, at a profit, specialty panels meeting the unique specifications of some volume users.

5. WAFERBOARD

Waferboard is not a new product. Production first occurred in 1962 with the opening of a plant in Hudson Bay, Saskatchewan, which produced 60,000 square feet (3/8" thick basis) the first year.

The waferboard industry in Canada has grown rapidly over the last two decades. In 1983, there are eight companies operating eleven mills. In 1982, these mills produced a total of 557,450,004 sq. ft. and the year before (1981), 785,109,920 sq. ft.

Canadian waferboard, unlike Canadian plywood, represents a substantial export commodity. Total Canadian production in 1982 was valued at \$76,788,000 of which \$37,626,000 or about one-half of production was exported, mainly to the United States. It is well known that 1982 was a poor year for the sale of all forest products, including waferboard.

Canadian mills face increasing competition from new mills recently entering production south of the border. Numerous new mills have been announced by U.S. manufacturers, who have recognized the potential for this product as a leading structural panelboard. Waferboard is replacing plywood which has been the traditional panel product used for subflooring, wall and roof sheathing in housing construction because it has the structural characteristics of plywood but is less expensive to produce.

Waferboard is made largely from aspen, a species of wood which does not find much other use as a structural material. The production process for its manufacture is also less labour-intensive than that of plywood, hence it is less costly to produce and market.

The North American demand prospects for waferboard are substantial for the remaining part of the decade. Production will more than triple over this period and waferboard will account for about one-quarter of North American production of construction grade wood-panels in 1990.

Despite increases in U.S. capacity over this period, the market opportunities for Canadian mills remain highly favourable. The Canadian industry requires government support on the following items to allow it to penetrate export markets and expand production capacity in Canada.

1. Continue efforts to amend U.S. customs regulations to eliminate U.S. duty on foreign inland freight on shipments of Canadian waferboard into the United States.
2. Assist in promoting waferboard and OSB and in acquiring code approvals for new end uses in the U.S. market.
3. Assist in removing the duty on waferboard and OSB into the EEC.
4. Help obtain code approvals in the EEC with special emphasis on the U.K. where timber frame construction is currently undergoing severe criticism.
5. Facilitate certification and testing of waferboard and OSB for use in Japan.

6. SHINGLES AND SHAKES

General

Shingles and shakes made from western red cedar constitute about 90 per cent of world production of wood shingles. The remainder is produced from eastern white cedar in eastern Canada with some small quantities of other species produced in Germany, New Zealand and Chile. Red cedar shingles and shakes are produced in British Columbia and the U.S. Pacific Northwest. Peak North American production in recent years was 5.96 mm squares in 1979. This value dropped substantially in 1981 to 4.15 mm squares but the Canadian share of North American production increased significantly from 35 per cent in 1976 to 63 per cent in 1981. Favourable exchange rates and raw material supply are the main factors in increasing Canada's share of the total market. About 90 per cent of Canadian production is exported to the United States. The value of total production in Canada is about \$200 million.

Raw Material Supply

For the most part, the shingle/shake industry relies on old growth cedar for raw material. Estimates of standing cedar inventory average about 1.5 billion board feet in the producing regions. About 75 per cent of this inventory is in B.C. In addition, salvage cedar forms a significant portion of available raw material, perhaps 10 per cent of the standing inventory. This wood is used exclusively by the shingle/shake industry, whereas lumber and other end users compete for standing timber. In 1979, 25 per cent of the cedar cut in B.C. went to shingle/shake mills.

By the end of 1983, exports of cedar logs will not be permitted from the United States. In the short term, this may retard the gradual movement of the industry northward into B.C., however, in the longer term, it is expected that B.C. will further increase its capacity and market share, putting additional strain on the available resources in B.C.

Demand

Shingle/shake demand is keyed directly to housing starts in the United States. About 90 per cent of B.C. production is exported to the U.S., 7 per cent is consumed in Canada and the remaining 3 per cent exported to the EEC and South Pacific.

Demand will generally fluctuate with the number of housing starts in the U.S., but the percentage share of the available

market is not expected to change significantly over the decade. There are some unknowns such as the extent of new building code restrictions for fire hazards in the United States which could have serious consequences for the industry. Offshore markets are expected to grow slowly over the decade, and the industry will remain reliant on the U.S. market.

Total world demand for shingles/shakes is expected to increase slightly in the mid 1980s, but over the decade will average current levels of about 4.5 to 5.0 mm squares. The Canadian share of the total is expected to increase gradually from the current level of about 65 per cent.

It is expected that there will be some short term, regional raw material supply constraints, but on the whole, raw material supply is not expected to be a limiting factor over the decade.

APPENDIX II

FOREST PRODUCTS COMPARATIVE COST STUDY

FOREST PRODUCTS COMPARATIVE COST STUDY

1. Need for a comparative cost study

Because of the involvement of governments in the development of public policies which have an impact on the forest industry, and because of the need of management, labour and government to have a data bank of comparative costs in which all will have confidence, a mechanism for monitoring Canada's competitive position is needed.

2. Location of and responsibilities for the study

There are advantages in having the study made the responsibility of the Forest Industries Advisory Committee rather than the responsibility of a government department.

3. Steering Committee

Such a study requires a steering committee of senior people to determine its scope, and a mechanism for carrying it out and overseeing the work as it proceeds. The steering committee would include representatives of government departments, labour unions and management. It could well turn out that to develop meaningful information, and to prepare this for the uses intended, a neutral party should be selected, to work under the direction of the steering committee.

4. Mechanism for carrying out the cost study

There are advantages to having the study carried out by one or more outside consulting firms. There are a number of such firms which could be considered for the assignment. The appropriate firm would be chosen by the steering committee.

5. Scope and coverage of the study

The steering committee would be required to answer a number of questions such as the following:

A. Specification of types of costs required:

- i) Average cost of production at existing mills
- ii) Cost of production at a "typical" new mill
- iii) Costs of key elements.

B. Products to be recovered:

- i) First priority items

Newsprint
Bleached kraft pulp
- hardwood
- softwood

Softwood dimension lumber

ii) Second priority items

Probably at a later date the following could be considered

Groundwood printing papers
Kraft linerboard
Corrugating medium

C. Regions

Eastern Canada
B.C. Coast
B.C. Interior

United States - South
Pacific North West
North East (Secondary priority)

Sweden
Finland

Brazil - as a supplier of bleached hardwood kraft pulp.

APPENDIX III

FORESTRY REFERENCES

AGENDA FOR ACTION

From the Banff Conference on Forestry, September 1981

World demand for forest products is expected to increase by 50 per cent in the next 20-25 years. For Canada this could mean greatly increased exports, many new jobs, and significant expansion of the country's premier group of industries.

But these gains will be impossible if there are not enough trees. Neglect of the forests -- underscored by the Canadian Forest Congress of 1980 -- has imperilled the resource. Shortages of timber are evident in every region. Renewal of our forests is urgently needed.

This means bringing the forests to full management, to ensure good yields, in the shortest possible time. If this is not done, the industries will face curtailment and dislocation. The whole economy will suffer.

WHAT SHOULD BE DONE?

1. Canada needs major reinvestment in forest management. It should focus on:
 - silviculture (growing more and better trees);
 - forest protection, against fire, insects and disease;
 - research; and
 - education
2. On silviculture we now spend about \$250 million annually. This needs to rise to at least \$600 million. Too little spending leads to rapid exhaustion of the forests, and imperils jobs and forest-based communities. We need to double the productivity of our forests, and to get rid of neglected and cut-over land.
3. Forest protection needs a doubling of present spending -- from \$250 million annually to over \$500 million. Fire, insects and disease have in some recent years removed as much timber as has useful cutting. Needs include:
 - better road access to the forests;
 - quicker attack on fire, insects and disease;
 - better pesticides;
 - better procedures for testing and registering pesticides.

WHO SHOULD DO IT?

4. All who benefit from the forest resource -- owners of the forest land base, industries, federal and provincial governments -- must share in this effort. Basic responsibility for the new investment must lie with The Land-Owners -- whether Provincial Governments or private entities --
 - for planning management objectives and performance standards;
 - for intensive management;
 - for protection from fire and insects.

In addition, responsibility rests on:

i) The Industrial Users

- for root stock, seedlings and genetic improvements;
- for planting and management;
- for environmentally sensitive harvesting;
- for some silvicultural research.

ii) The Government of Canada

- for leadership in research and some aspects of education;
- for appropriate tax structures and budget commitments;
- for a much improved and high priority statistical and public information apparatus;
- for increased assistance to land owners for silviculture during the transition to full management (1-2 decades), including encouragement of small private forest owners.

5. Responsibility for other support lies with:

i) Universities and Technical Schools

- for strengthened faculties and curriculum;
- for development of excellence;
- for a doubled output of good graduates;
- for innovative contract or grant-supported research.

ii) Provincial Governments, supported by the Government of Canada and industry:

- for adequate budgets for university and technical school expansion.

A COMMON VOICE

6. The forest industries need a strong and consistent common voice. At present there are more than 50 associations, representing sub-sectors of the industry. As a first step, a new structure must be created -- a Canadian Forestry Council -- to represent all parts of the industry. Consideration must also be given to broader forestry forum including senior governments, trade unions, forestry schools and other intested parties.

The following publications are available:

- Taxation and Private Land Forests and Woodlots in Canada - a report for the CFS by the Canadian Forestry Association.
- Canadian Forest Fire Statistics - 1980 - published by Environment Canada.
- Silviculture Statistics for Canada - 1975-80 - published by Environment Canada.
- Canada's Forest Inventory - 1981 - published by the Canadian Forestry Service.
- A Forest Sector Strategy for Canada - released by the Honourable John Roberts, Minister of Environment, September 30, 1981.
- Policy Statement - A Framework of Forest Renewal - September, 1982 - Environment Canada.
- Herbicides and Forestry - An essay supplied to the CFAC.
- Health Effects of Herbicides 2,4,D and 2,4,5-T. Prepared by the Herbicide Committee of the Inverness Victoria Medical Society for the Nova Scotia Forestry Commission.
- Evaluation of Future Canadian Requirements for Professional Foresters, Scientists with Basic Training in Forestry and Forest Technicians - Prepared by Marcel Lortie for the CFAC.
- Canada's Threatened Forest - A statement by the Science Council of Canada.

The foregoing are in addition to the proceedings of the Canadian Forest Congress and also the Agenda for Action statement by the Banff Conference, which is published in the 1981 report of the CFAC.

APPENDIX IV

TERMS OF REFERENCE

FOREST INDUSTRIES ADVISORY COMMITTEE

Forest Industries Advisory Committee

Terms of Reference

1. To provide advice and guidance on a continuing basis to the Minister of Industry, Trade and Commerce and Regional Economic Expansion and through the Minister to the federal government on any matter concerning the performance and well being of the forest industry and its employees.
2. To assist the Minister in developing an in-depth analysis of the present and prospective performance of the forest industry in the domestic and international environment.
3. To assist the Minister in identifying priorities and formulating appropriate strategies that assist the forest industry in increasing its contribution to national and regional industrial development.
4. To assess the appropriateness of existing federal policies and programs and to make recommendations from time to time for new initiatives and/or policy changes.

COMPOSITION

1. Senior executive officers of business and labour.
2. The co-chairmen to represent business and labour.
3. ITC/DREE to provide secretarial support and to be represented on an "ex-officio" basis.

NEWS RELEASEDepartment of Industry, Trade and Commerce and Regional Economic Expansion

OTTAWA, April 5, 1983 -- Senior business and labour representatives from across Canada have responded to the federal government's initiative in the formation of a Forest Industries Advisory Committee. The Committee will assist federal efforts to ensure the economic viability of Canada's forest products industry, the country's largest industry and net exporter.

In making the announcement today, Industry and Regional Development Minister Ed Lumley said, "The forest products industry is facing some significant challenges, especially substantially increased international competition and a declining resource base. This Committee will provide the advice and guidance necessary for us to aid the industry and its employees in responding to the changing market conditions."

The Committee will be co-chaired by Mr. Ian A. Barclay, Chairman of B.C. Forest Products Ltd. of Vancouver, and Mr. James Buchanan, President of the Canadian Paperworkers Union, headquartered in Montreal.

The forest products industry, which includes the wood products and pulp and paper sectors, is Canada's leading industry in terms of sales, employment and export earnings and is the economic mainstay of many single industry communities across the country. The industry and dependent communities have been severely affected by the world recession -- current operating ratios are estimated to be in the 75-85 per cent range for pulp, lumber and newsprint operations.

Revitalization of the industry is mainly contingent on a world economic recovery. In the interim, action by both the private sector and government is required to ensure that the industry is ready to take advantage of the pick-up in domestic and export demand expected to begin in 1983 and gradually gain momentum throughout the rest of the decade.

On the recommendation of business and labour executives, the Government has set up an ongoing advisory committee rather than a sunset task force in order that the industry can respond to rapidly changing domestic and international developments affecting the performance of the industry.

Underlining the importance of private sector input to federal policy formulation and decision making, the Minister said, "I would like to stress that this is an industry advisory committee, not a government task force. Such committees provide an excellent way for both labour and management to get their views across to federal policy makers."

The Minister has asked for an interim report by June 1983.

"Management and labour executives are in an excellent position to review the current competitive situation of the forest products industry and to develop an action-oriented game plan identifying the areas where the Government can assist the industry in responding to competitive challenges," he said.

APPENDIX V

COMMITTEE MEMBERS

Forest Industries Advisory Committee

List of Members

Co-Chairmen

Ian A. Barclay, Chairman
B.C. Forest Products Ltd.
Vancouver, British Columbia

James Buchanan, President
Canadian Paperworkers Union
Montreal, Quebec

Paul Bienvenue, President
Howard Bienvenue Inc.
Montreal, Quebec

C.C. Knudsen, Chairman &
C.E.O.
MacMillan Bloedel Limited
Vancouver, British Columbia

Thomas A. Buell
President & C.E.O.
Weldwood of Canada Ltd.
Vancouver, British Columbia

L. Lockhart
President
Lock-Wood Ltd.
Scoudouc, New Brunswick

Georges Cantin, President
Fédération des travailleurs du
papier et de la forêt
Quebec, Quebec

Jack Munro
President
IWA Council No. 1
Vancouver, British Columbia

R. Dancer, Executive Board
Member
United Brotherhood of Carpenters
and Joiners of America
Calgary, Alberta

J. Perron
President
J.H. Normick, Inc.
La Sarre, Quebec

John Fisher
Chairman & C.E.O.
Fraser Inc.
Edmunston, New Brunswick

R.R. Pinard, Executive
Vice-President & C.O.O.
Domtar Inc.
Montreal, Quebec

C.S. Flenniken, President
& C.E.O.
CIP Inc.
Montreal, Quebec

J.C. Scarth, President
E.B. Eddy Forest
Products Ltd.
Ottawa, Ontario

R.C. Gimlin, President
& C.E.O.
Abitibi-Price Inc.
Toronto, Ontario

S. Spears, President
Premium Forest Products Ltd.
Scarborough, Ontario

R.C. Keef, Resident Manager
Nova Scotia Forest Industries
Port Hawkesbury, Nova Scotia

A.H. Zimmerman, President
Noranda Mines Limited
Toronto, Ontario

John C. Kerr
President
Lignum Ltd.
Vancouver, British Columbia

APPENDIX VI

LIST OF ORGANIZATIONS WHICH MADE SUBMISSIONS
TO THE COMMITTEE

Forest Industries Advisory Committee

List of Submissions

The following organizations have submitted views to the Committee:

Alberta Forest Products Association
Canadian Paperworkers Union
Canadian Pulp and Paper Association
Council of Forest Industries of British Columbia
Fédération des travailleurs du papier et de la forêt
Forest Engineering Research Institute of Canada
Forintek Canada Corp.
Government of Canada:
 Canada Employment and Immigration Commission
 Department of the Environment
 Department of External Affairs
 Department of Industry, Trade and Commerce/Regional
 Economic Expansion
Government of Newfoundland and Labrador:
 Department of Development and
 Department of Forest Resources and Lands
International Woodworkers of America
Maison Placements Canada Inc.
Morgan Stanley and Company
Maritime Lumber Bureau
Ontario Lumber Manufacturers' Association
Pulp and Paper Research Institute of Canada
Quebec Lumber Manufacturers Association
Waferboard Association of Canada

APPENDIX VII

SECTOR PROFILE
THE CANADIAN FOREST INDUSTRY

Department of Industry, Trade and Commerce
and Regional Economic Expansion
Ottawa

July, 1983

TABLE OF CONTENTS

	<u>PAGE</u>
1. DEFINITION	VII-1
2. PROFILE	VII-1
a) Significance	VII-1
b) Dimensions	VII-1
c) Main Subsectors	VII-2
d) Structure of the Industry	VII-2
e) International Trade	VII-4
f) Competitive Position	VII-5
g) Technological Developments	VII-7
3. MEDIUM-TERM OUTLOOK	VII-8
a) Current Market Situation	VII-8
b) Previous Performance	VII-9
c) Medium Term Prospects	VII-10
4. NATIONAL SECTORAL POLICIES	VII-11
ANNEX A - Medium Term Outlook for the Forest Industry by Major Product Sector	VII-14
1. WOOD INDUSTRIES	VII-14
a) Softwood Lumber	VII-14
b) Exterior Panels	VII-16
c) Shingles and Shakes	VII-18
d) Millwork	VII-19
e) Prefabricated Housing	VII-20
2. PAPER AND ALLIED INDUSTRIES	VII-22
a) Pulp	VII-22
b) Newsprint	VII-23
c) Other Paper and Paperboard	VII-24
d) Converted Paper Products	VII-29
3. LOGGING INDUSTRY	VII-30

THE CANADIAN FOREST INDUSTRY1. DEFINITION

The forest industry in Canada consists of over 5,000 companies engaged in logging (SIC Division 2, Major Group 1) and in manufacturing a wide variety of products in the wood industries (SIC Division 5, Major Group 8) and paper and allied industries (SIC Division 5, Major Group 10).

2. PROFILESignificance

The forest industry constitutes the single largest segment of Canadian manufacturing and is a major source of export earnings. It confers significant socioeconomic benefits in all regions of Canada and is the sole base for industrial development in many communities throughout the country.

The industry provides much impetus for development of other manufacturing and service industries through its many backward and forward linkages. It supplies a diverse range of industrial goods required in other sectors including residential building, printing and publishing, industrial packaging and furniture manufacturing. It is also a large consumer of energy, transportation services and machinery and equipment including process control systems embodying advanced technologies.

Internationally, the industry has become a leading supplier of forest products in world markets. This evolution has been supported by the application of efficient harvesting and processing techniques, development of a reliable marketing infrastructure and availability of a substantial renewable raw material base.

Dimensions

Total Canadian shipments, excluding logging, were valued at \$24 billion in 1981. The industry accounts for 13 per cent of all manufacturing shipments, 10 per cent of value added and 20 per cent of total new investment in Canadian manufacturing. It directly employs about 300,000 workers, approximately 80 per cent in manufacturing and 20 per cent in logging operations.

In 1981, 54 per cent of forest industry shipments, or \$13 billion, was exported, primarily to the United States, Europe and Japan. Total exports of the industry represented 16 per cent of Canadian merchandise exports

and 24 per cent of exports of fabricated materials and end products. Net exports of forest products, \$11.6 billion in 1981, were the largest of any resource or manufacturing sector in Canada.

All regions have a significant stake in the industry. For example, over one-half of British Columbia's industrial production and exports are accounted for by forest products; in the Maritimes, forest products account for about one third of total manufacturing activity; in Quebec and Ontario, the forest industry is by far the largest manufacturing sector outside of the large metropolitan areas and accounts for 15 per cent and 7 per cent of total manufacturing activity in these provinces. In the Prairie provinces, these proportions run from 10 to 15 per cent.

Main Subsectors

The total value of shipments of all forest products amounted to \$23 billion in 1980, the latest year for which all relevant data is available. About one-third of total shipments is accounted for by wood industries and the remaining two-thirds by paper and allied industries.

In the wood industries, lumber shipments were the largest component accounting for \$4.0 billion or almost one half of total wood product shipments. The next major subsector is millwork at \$1.1 billion followed by exterior panels (softwood plywood and waferboard) at \$0.6 billion and prefabricated housing at \$0.3 billion.

In the paper and allied industries, shipments were almost equally divided between the four main subsectors; market pulp (\$4.1 billion); newsprint (\$3.7 billion); other paper and paperboard (\$3.0 billion); and converted paper and board products (\$3.6 billion).

Not included in total shipments of manufactured forest products are logging shipments (\$4.6 billion in 1980) which mainly consist of roundwood harvested for processing in domestic wood, paper and allied industries. Exports of roundwood are only about \$0.1 billion.

Within Canada, the major producing regions are British Columbia and Central Canada although there is a different product orientation in each region. For example, British Columbia accounts for about one half the total value-added in Canadian wood industries while in Central Canada the industry is heavily oriented to pulp and paper. Ontario and Quebec account for almost two-thirds of total value-added in Canadian paper and allied industries.

Structure of the Industry

While generalizations are difficult given the diverse nature of the industry, it is important to differentiate between three structurally different groups that have developed over the years. The lumber, pulp and newsprint sectors, which account for about 60 per cent of total industry shipments developed in a relatively duty-free environment and are geared towards export markets. These three products account for about 85 per cent of total forest product exports. There are those sub-sectors such as plywood, waferboard and certain paper grades which sell in both domestic and export markets. Other product sectors, particularly high value-added products such as millwork, kitchen cabinets and converted paper products, developed mainly to service a protected Canadian market.

The major trend has been towards increased horizontal and vertical integration in response to changes in technology, capital requirements, raw material utilization, provincial forest policies and the need to remain competitive in world markets. Integration of raw material procurement and manufacturing facilities has been well established in British Columbia for many years and major advances towards this end have been accomplished in Central and Eastern Canada with increased utilization of wood residues in pulp and paper manufacturing. Many companies have systematically diversified their product lines and geographical base of operation through mergers, acquisitions and internal growth. Independent companies in the various product sectors are also becoming increasingly interdependent through integrated utilization of fibre supplies and contractual marketing arrangements.

Despite this trend towards integration, there remain over 5,000 corporations in the forest products industry, many of which are small or medium-sized firms. The influence of large, fully integrated, and multinational companies, is diffused in Canada as important product sectors such as lumber and market pulp still contain relatively large, independent producers. The top five companies in each of the respective product sectors account for about 60 per cent of total paper and paperboard production, about 30 per cent of total market pulp production and about 25 per cent of total softwood lumber production. Production of softwood plywood, fine papers and certain other paper grades is more concentrated.

A significant proportion of the timber harvested in Canada originates from provincial Crown land held under long-term lease by the large, integrated companies. Many provinces have either changed their forest management and timber allocation policies within the last few years or have new

legislation in advanced stages of planning. The trend is toward shifting responsibility for undertaking forest management practices from the provinces to industry and, in some provinces, replacing area agreements with volume agreements. There are few organized log markets in Canada such as the Vancouver log market although the sale of pulp chips from independent lumber producers to pulp and paper mills has become the major source of fibre inputs for pulp production. The role of independent contract loggers operating on company limits is important in British Columbia but most pulp and paper companies and large sawmills elsewhere in the country operate their own logging divisions. Privately-owned wood lots are an important source of timber in Atlantic Canada, in the southern regions of Ontario and Quebec and on the B.C. Coast.

The construction of a large number of market pulp mills in Canada over the last two decades, particularly in the B.C. Interior, has gradually reduced the proportion of total wood pulp production used in the same or affiliated mills in Canada from 74 per cent in 1960 to 66 per cent in 1970 to 62 per cent in 1979. Over 50 per cent of Canada's market pulp capacity is owned by companies which produce no paper or board. In contrast, less than 5 per cent of Canada's paper and board capacity is non-integrated with pulping facilities. The trend in major world pulp and paper producing regions such as Scandinavia and the United States is towards increased integration of pulp and paper production. Opportunities are also emerging in Canada for the establishment of new integrated operations, particularly in mechanical pulp based products such as groundwood printing papers. Forward integration into foreign paper-making facilities by Canadian pulp and paper companies is limited although several foreign companies have integrated backwards into Canadian primary production.

Integration between the primary manufacturing and secondary manufacturing sectors is largely confined to pulp and paper companies as secondary wood manufacturers are mainly small, non-integrated companies. Non-integrated converted paper producers must compete with several large integrated pulp and paper companies that supply their raw material inputs. For example, many, although not all, of the large paperboard and kraft paper manufacturers have container or bag plants; tissue mills manufacture and market a variety of converted consumer products; and fine paper mills have wholesale merchants as well as, in some instances, facilities for producing envelopes, school and office supplies and other converted products.

International Trade

World trade in forest products amounted to \$51 billion U.S. in 1981 and has been growing faster than world consumption. The roundwood equivalent of industrial forest products which are traded internationally now represents over one-third of total world consumption. This trade has traditionally been confined to a limited range of products due to trade barriers on more fully processed products and to adjacent regions due to high transportation costs but this is changing.

Canada accounts for almost one quarter of total world trade in forest products. The United States accounts for 70 per cent of total Canadian exports followed by the EEC with 15 per cent, Japan with 7 per cent and the remaining 8 per cent distributed among 45 other countries around the world. Scandinavia is also highly export-oriented with about the same value of exports and product mix as Canada but the prime market is the EEC. Japan is almost self-sufficient in manufactured forest products but imports over half of its raw fibre requirements for its lumber and pulp and paper industries from the United States, the USSR and Southeast Asia. Japan is expected, however, to become a major importer of more processed forest products such as pulp, lumber and newsprint over the medium term because of relatively high processing costs in Japan and further processing policies of log exporting countries.

North America, Western Europe and Japan account for about three-quarters of world production and trade in forest products and for about 95 per cent of the total market for Canadian production. These markets are, therefore, the prime interest of Canadian companies. Nevertheless, production and consumption of forest products is expanding rapidly in certain tropical and southern hemisphere regions as a result of investments in large-scale industrial softwood and hardwood timber plantations and increased per capita incomes. For many countries, the emphasis is on increased self-sufficiency. High development and transportation costs preclude serious competition in world markets in the medium term although several countries such as New Zealand, Chile, Brazil and New Guinea will become increasingly important suppliers to Europe and Japan in the longer term.

The United States is by far Canada's best customer but, at the same time, is also becoming a formidable competitor in U.S. and offshore markets. This can largely be attributed to the regional nature of North American supply/demand. The major consuming regions in California, the Midwest and Northeast are serviced by timber surplus regions in the U.S. South, Pacific Northwest and Canada. The United

States is the world's largest exporter of kraft linerboard (mainly to Europe and Latin America) and softwood logs and pulp chips (mainly to Japan). The U.S. is a major importer of softwood lumber, pulp and newsprint, virtually all of which originates in Canada, but is expected to become more self-sufficient in these products in the 1980s. This will force Canadian producers of these major export items to rely more heavily on Europe, Japan and other offshore markets than in the past. At the same time, the U.S. is considered the principal market area for expanded exports of higher value-added paper and wood products provided Canadian producers can achieve the necessary standards of international competitiveness.

Competitive Position

Wood, labour, energy and transportation are the principal elements of forest product manufacturing costs which determine the ability of Canadian producers to compete in increasingly competitive world markets.

Wood costs account for the largest share (25-50 per cent) of manufacturing costs of primary products and will tend to increase in the long term as industry utilizes more distant and marginal stands and as more funds are devoted to intensive forest management.

Labour costs represent 10-30 per cent of costs of manufacturing lumber, pulp, newsprint and other primary products but are higher for more labour intensive products such as plywood (30-40 per cent) and logging (40-60 per cent). While labour cost increases will likely reflect the improved outlook for general price inflation in the medium term, significant opportunities remain for productivity gains associated with plant modernization and other technological improvements described below.

Transportation costs can represent as much as 40 per cent of selling prices reflecting the long distances between mills located near northern or interior forested areas and coastal shipping ports and final market destinations.

Studies conducted by ITC in 1977 indicated that Canadian producers of newsprint and bleached kraft pulp were at a pronounced disadvantage to U.S. producers due to higher wood, labour and transportation costs. For softwood lumber, Canadian producers were generally competitive with their U.S. counterparts. Manufacturing costs of pulp and newsprint in Scandinavia were found to be considerably above those prevailing in North America in 1977, due largely to high wood costs but subsequent depreciation of Scandinavian currencies relative to the Canadian and U.S. dollars has reversed this situation.

A federal-provincial survey was carried out under the aegis of the Federal/Provincial Forest Industries Development Committee in 1982 to update the previous cost data. This update indicates that the U.S. South continues to be the low cost producer of newsprint, bleached kraft pulp and lumber in North America when Canadian and U.S. dollars are considered at par but real gains in productivity together with a depreciated dollar has greatly improved the competitive position of Canadian producers since 1976. Sharp increases in chip prices on the West Coast of North America in 1979/80 greatly eroded the competitive position of pulp and paper producers in these regions, especially in the Northwestern U.S. but the sharp cost differential evident in 1980 has subsequently returned to more normal levels.

The substantial capital spending boom evident in 1979-1982 is a major factor in securing an improved competitive position. The newsprint industry in particular has incorporated new technology that is more efficient and uses lower cost wood residues in place of roundwood. Older, less efficient newsprint machines have been speeded up, converted to specialty grades or are being phased out of production.

In terms of medium-term prospects, the U.S. South is expected to continue to enjoy lower delivered wood, labour and transportation costs throughout the next decade. The widening in the labour cost differential between Canada and the United States evident in 1981/82 wage settlements is a worrisome trend. The Canadian industry will therefore be under continuing pressure to contain its costs in all areas and would be hit hard by any substantial appreciation in the value of the Canadian dollar.

Substantial fluctuations in international currency markets have made questions of international competitiveness more uncertain and have raised new marketing problems for Canadian producers abroad, particularly at a time of depressed demand and heavy price discounting. For example, while Canada has benefitted from the Canadian dollar being at a discount to the U.S. dollar, the Canadian dollar has nevertheless been relatively strong in relation to European currencies. Traditionally high cost producers in Finland and Sweden which enjoy a built in transportation advantage are now highly competitive in European markets with devaluations in their respective currencies in the order of 30 to 40 per cent over the last two years. At the same time, European importers, especially in France and Italy are faced with substantial price increases of forest products when prices are expressed in local currencies.

Technological Developments

Although the forest products industry, can in many respects be considered a mature industry, the development and widespread application of new technology of both Canadian and foreign origin is essential to remaining competitive in world markets. In view of the high proportion of commodity items (i.e. lumber, pulp and newsprint) in the total product mix and the capital intensive nature of many product sectors, the emphasis is more on process development than product development.

In the logging sector, power saws, wheeled skidders and, on the B.C. Coast, cable logging systems, are the dominant logging methods used in Canada today. Similarly, tree length logging has replaced the former method of bucking into short lengths before hauling. More recent innovations include felling with shears and feller--bunchers but these are not used extensively. While it is unlikely that a major breakthrough in new logging technology will come on stream in the 1980s, possible new developments include lighter-than-air vehicles for logging on steep sites and multi-function accumulator-forwarders designed to operate without extensive road networks.

In the wood products sector, the most significant technological changes have been in the development of systems with the capability of processing small diameter logs at high linear feed rates and the use of new electronic control systems. This has enabled the industry to achieve higher productivity levels and to process the more marginal timber stands. Emphasis over the medium term will continue to be placed on improving mill efficiency, reducing labour content and achieving more effective utilization of fibre inputs through both small log processing and high grade recovery systems. Examples of these ongoing developments are computer controlled log handling and sorting systems, electronic scanners and computer system control of sawing, peeling, clipping and drying operations, automation of the sorting of the finished lumber and semi-automatic panel assembly lines in plywood mills.

In the pulp and paper sector, critical problems related to pollution abatement, fibre utilization, and cost reduction are being met, in part, by major developments such as oxygen bleaching, chemi-thermomechanical pulp for newsprint, new additives to increase pulp yield, twin-wire high speed paper formers, synthetic paper machine fibres and new sensing devices for the increasing computer control of operations. These developments are contributing to better utilization of our available resource while at the same time reducing costs, energy demand and pollution.

Despite this emphasis on processing technology, the development of new products such as groundwood specialties, waferboard and other composite panel products has resulted in new growth sectors in the forest products industry.

3. MEDIUM-TERM OUTLOOK

Current Market Situation

The forest products industry has been severely affected by world recessionary conditions. The wood products industry in particular has experienced extremely depressed demand in virtually all major markets over the past three years. Lumber production fell in each year since 1979, a cumulative decline of 18 per cent by 1982 resulting in extended lay-offs and mill shutdowns. Production of softwood plywood and waferboard declined more than 30 per cent between 1979-1982. The surprising acceleration in residential construction activity in North America in the first part of 1983 has resulted in greatly improved prices and operating ratios in the lumber industry. Production will likely be up by 20 per cent in 1983 and reach the previous 1979 peak by 1984 or 1985.

In pulp and paper, domestic and export markets remained comparatively stable until 1982 when they fell by 10 per cent. Recovery of pulp and paper markets will be more gradual than those of wood products reflecting the modest growth in world economies and strong competition from suppliers in other countries, particularly Scandinavia and the United States. Operating rates which fell to around 80 per cent in 1982 are expected to remain well below 90 per cent in 1983 although shipments should improve by about 7 per cent over last year. Major increases in productive capacity in Canada and other countries leave little room for improvement in operating rates in the important newsprint sector.

Production curtailments and reduced prices for forest products, coupled with high levels of debt at high interest rates incurred to finance major capital spending programs over the last few years have completely ravaged corporate balance sheets. Most companies have implemented severe restraint programs to cut capital and operating costs and to conserve working capital. There is a real danger that these cost-cutting exercises will reduce expenditures on R&D and capital improvement programs that are required to ensure the industry's long-term international competitiveness. Capital expenditures for 1983 are estimated at \$1.4 billion for the forest industry, about half the annual level of the 1980-82 period. In short, what started out as a severe cyclical

downturn may have longer-term structural implications for the Canadian industry.

Looking to the future, the forest products industry can be expected to continue to make a major contribution to the economy. World demand for pulp and paper products is anticipated to grow at about three per cent per year over the next decade. Strong growth is expected in bleached kraft pulp, for which Canada accounts for nearly half of world exports, and to a lesser extent in newsprint, where Canada's share is about two-thirds. Growth in world demand for groundwood specialty papers will be substantially higher than for standard grades of newsprint, and Canada, with a comparative advantage in these products, is well placed to expand production and exports. World demand for softwood lumber for which Canada accounts for about 45 per cent of world exports, will also grow, but more slowly, at about one per cent per year. A more detailed medium-term outlook examining the opportunities and constraints in each of the major product sectors is included in Annex A and is summarized in the following section.

Previous Performance

In contrast to the latter part of the 1970's, Canada's forest products industry experienced relatively strong expansion during the decade of the 1960's. Demand was sustained by buoyant economic conditions in domestic and export markets characterized by low inflation, moderate unemployment and strong GNP growth except for comparatively mild recessionary periods in 1963 and 1968. Shipments increased at average annual rates of 4.2 per cent in the wood industries and 4.6 per cent in paper and allied industries for the decade as a whole.

	<u>Canadian Forest Products Industry Shipments</u>						
			<u>1960 to 1980</u>				
	<u>1960</u>	<u>1970</u>	<u>1974</u>	<u>1980</u>	<u>1960-70</u>	<u>1970-74</u>	<u>1974-80</u>
	(millions of 1980 dollars)				(average annual % change)		
Wood Ind.	3,519	5,326	6,547	8,397	4.2	5.3	4.2
Paper and							
Allied Ind.	6,966	10,916	14,037	14,503	4.6	6.5	0.5
TOTAL FOREST							
PRODUCTS							
IND.	10,485	16,242	20,584	22,900	4.5	6.1	1.8

Note: Shipments inflated to 1980 dollars.

In the 1970s, the industry experienced three cyclical phases all of which required significant adjustment to varying conditions in markets and competitiveness.

First, demand expanded rapidly with continuation of the 1960s world commodity boom in the period 1970-74. Shipments of wood products peaked in 1973 followed by pulp and paper products in 1974. Prices rose sharply with demand and average profit levels increased to 14.2 per cent of capital employed in the wood products industries in 1973 and 11.4 per cent in pulp and paper in 1974.

Second, in 1974-76, world demand weakened primarily as a result of steep crude oil price increases in 1973-74 and the associated reduced growth in forest product consuming industries. Real forest product prices fell steeply and average profits declined as a percentage of capital employed to 4.5 in 1975 and 4.2 in 1976 in wood and pulp and paper industries respectively. Scheduled investments in repair, maintenance, modernization and expansion were postponed in the face of low profits and reduced prices and demand.

In the third cyclical phase, 1976-80, industry shipments in the wood industries recovered significantly at over 4 per cent average annual growth led by strong export demand coupled with depreciation of the dollar against most international currencies while the pick up in demand for pulp and paper was more gradual.

Medium Term Prospects

In the early years of the 1980s, high real interest rates combined with the legacies of the mid-seventies (slow economic growth and inflation) to stifle forest product demand in end-using industries such as new housing construction in North America and abroad. The protracted downturn in demand and shipments in wood products started in 1980 followed by pulp and paper in the later part of 1981. Rates of capacity utilization were 20 to 30 per cent below normal and profits fell sharply in 1982.

In looking at the remaining part of the 1980s, a recovery from recessionary conditions in North America and other OECD economies is now underway with sharply reduced rates of inflation and interest rates and renewed economic growth. While the near-term economic outlook continues to be clouded by the potential for a run-up in interest rates, the consensus of forecasters is for strong economic growth occurring in the middle of the decade before stabilizing towards the end. The medium term outlook for the forest products industry as a whole, assuming a policy neutral stance and an equilibrium value of the Canadian dollar of between 0.79 and 0.83 \$U.S. is for a real rate of growth in shipments of 2.3 per cent per year between 1980 and 1990. Given the current cyclical downturn, this average rate of growth is not low in comparison to other industrial sectors in Canada and envisages stronger growth

in the period 1984-90 than in 1980-84 or 1974-80 periods. Rates of growth are expected to be about the same in the paper and allied industries and in the wood industries during the 1980s in contrast to the higher rate of growth in the wood industries throughout most of the 1970s.

The table below summarizes the medium term outlook for the forest products industry. Reviews of the individual product sectors are contained in Annex A. In summary, higher rates of growth are anticipated for market pulp and high valued-added products compared to lumber and newsprint. The projections assume an average annual increase in GNP of 2.6 per cent in Canada and 2.4 per cent in the U.S. between 1980 and 1990.

The Canadian Forest Products Industry, 1980 to 1990

	<u>Total Shipments</u>		<u>Domestic Shipments</u>		<u>Exports</u>	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
	(billions of 1980 dollars)					
Lumber	4.0	4.6	0.6	0.7	3.4	3.9
Exterior panels	0.6	0.8	0.4	0.5	0.2	0.3
Millwork	1.1	1.8	1.0	1.5	0.1	0.3
Other Wood Products	2.7	3.5	2.2	2.2	0.5	0.7
<u>Sub-total:</u>						
WOOD INDUSTRIES	8.4	10.7	4.2	5.5	4.2	5.2
AAGR (%)	2.4		2.7		2.2	
Woodpulp	4.1	5.4	0.3	0.4	3.9	5.0
Newsprint	3.7	4.4	0.1	0.2	3.7	4.2
Other paper & paperboard	3.0	3.6	2.2	2.6	0.8	1.0
Converted paper	3.6	4.6	3.4	4.3	0.2	0.3
<u>Sub-total:</u>						
PAPER & ALLIED IND.	14.5	18.0	5.9	7.5	8.6	10.5
AAGR (%)	2.2		2.4		2.0	
TOTAL FOREST PRODUCTS INDUSTRY	22.9	28.7	10.1	13.0	12.8	15.7
AAGR (%)	2.3		2.6		2.1	
LOGGING IND.	4.6	5.6	4.5	5.5	0.1	0.1
AAGR (%)	2.0		2.0		-	

Note: AAGR denotes Average Annual Growth Rates

4. NATIONAL SECTORAL POLICIES

The Government enunciated a number of sector-specific initiatives to meet industrial and trade development objectives in the forest products sector on February 1, 1979. This announcement took the form of the Government's response to the individual recommendations of the 1978 Forest Products Industry Sector Task Force and the establishment of the National Development Policy for the Forest Products Industry. It had three basic thrusts:

- Establishment of the \$235 million modernization program for the pulp and paper industry;
- Statement of intent to increase the federal funds available for resource development through subsidiary agreements with the provinces; and
- Statement of intent to increase the Government's export promotional efforts including a continued commitment to sector-specific programs such as the Cooperative Overseas Market Development Program for lumber and plywood produced in British Columbia.

The Pulp and Paper Modernization Program was subsequently expanded to \$276 million and redirected to projects in the five provinces in Eastern Canada. In making the announcement on July 31, 1980, the Minister emphasized his commitment to work with the forest industry and the Governments of British Columbia, Alberta, Saskatchewan and Manitoba towards the development of programs more tailored to the unique needs of the forest industry in these provinces. The Government also agreed in principle that greenfield and conversion projects in the pulp and paper industry would be eligible for consideration of federal financial assistance outside the modernization program and on a case by case basis.

Implementation of this program is now well advanced in most provinces although the current cash squeeze in the industry and its impact on the ability of companies to carry out major capital spending programs may require some review of the program's termination date currently scheduled for 1984.

A Forest Sector Strategy for Canada prepared by the Department of Environment was released for public distribution on September 30, 1981. This is basically a framework document with heavy orientation to resource management issues. Federal-provincial forestry subsidiary agreements are currently in place in seven provinces (Newfoundland, New Brunswick, Nova Scotia, Quebec, Ontario, Saskatchewan and British Columbia). Departmental responsibility for these agreements was transferred from DREE to DOE as a result of the government reorganization of economic departments in January, 1982. The Minister of Environment announced a set of guidelines to govern federal participation in the new

generation of these forestry agreements in September 1982. The Department of Environment has also undertaken a number of initiatives aimed at increasing R&D and human resource development in the forestry area as a follow-up to the Forest Sector Strategy for Canada.

The Minister of Industry, Trade and Commerce was requested to develop initiatives aimed at increasing markets, innovation and value-added in the forest products sector as an integral part of the Forest Sector Strategy for Canada referred to above. This work has identified six priority areas for forest industry development.

- 1) consolidating the gains made with the U.S. in the MTN and continuing to seek liberalized access for forest products in other foreign markets against a background of mounting protectionist sentiments in the industrialized world;
- 2) encouraging the development of improved production processes and new products to achieve productivity gains and to increase international competitiveness;
- 3) facilitating industrial expansion and renewal where adjustments in forest industry operations are economically viable and contribute to federal government objectives;
- 4) encouraging better utilization of fibre supplies and increased value added in manufacturing, processing and marketing activities;
- 5) assisting Canadian companies in identifying and capturing export market opportunities created by improved supply capabilities and terms of market access; and
- 6) maintaining an open dialogue with the private sector and provinces on matters affecting the performance of the forest products industry.

ANNEX AMEDIUM-TERM OUTLOOK FOR THE FOREST INDUSTRY
BY MAJOR PRODUCT SECTOR1. WOOD INDUSTRIESSoftwood Lumber

The Canadian softwood lumber industry consists of over 1,300 sawmills located in virtually all accessible forest regions across the country. The majority of these mills are large enough to engage in export marketing as well as in supplying domestic markets. Production is concentrated in British Columbia which accounts for about 65 per cent of total Canadian sawmill output followed by Quebec (17%), Ontario (9%), Alberta (4%), New Brunswick (3%) and the remaining 2 per cent in other provinces and the Territories.

Canadian shipments of softwood lumber are expected to reach about 21.0 billion board feet in 1990, up from 18.3 billion board feet in 1980. This average annual increase of 1.4 per cent compares with 5.3 per cent in the decade before 1980 but is more consistent with long term shifts in North American consumption and production. The high rate of growth during the 1970s can largely be attributed to historically high levels of housing activity in North America and on the supply side, the significant expansion of sawmill facilities in the B.C. Interior and Central Canada to achieve improved resource utilization targets and further integration with the pulp and paper sector. These factors will not be present in the 1980s.

The lumber industry in all regions of the country has gone through the deepest and most prolonged market downturn in over 40 years. Softwood lumber production for 1982 amounted to 15.4 billion board feet, a reduction of 16 per cent since 1980 in volume terms and considerably more in value terms given the significant drops in lumber prices since 1979/80. Manhour curtailments and lay-offs ranging from 20 to 40 per cent pushed unemployment levels in most sawmill dependent communities to intolerable levels. Improved product prices and a pick-up in export and domestic demand in the order of 15 per cent is anticipated for 1983 with the remarkable recovery in U.S. housing markets and industrial production levels but the industry is not expected to reach 1980 production levels until 1984 or 1985. The Prairie Provinces and B.C. will account for most of the growth in softwood lumber production during the rest of the decade.

Exports of softwood lumber to the United States totalled \$2 billion in 1980, representing about one-half of total Canadian shipments. Domestic shipments accounted for an additional \$655 million. A significant proportion of this lumber is used in residential construction. Thus, the housing outlook in North America is of major interest to the Canadian lumber industry.

In the United States, recent forecasts of housing starts for 1983 and 1984 have been revised upward to 1.6-1.7 million units compared to the severely depressed level of 1.0 million last year. There is considerable debate on the future direction of U.S. housing for the rest of the decade. The high level of housing demand projected a few years ago based on strong demographic factors are now being reduced to reflect questions of affordability and the higher than anticipated cost of mortgage credit. U.S. annual housing starts are now expected to average 1.7 million units in 1984-90 which is about the same level recorded in the 1970s.

In Canada, residential construction activity was also greatly reduced by the combination of high interest rates and economic recession in 1982. Federal and provincial housing programs and a moderation in interest rates will likely result in a housing start total of 155,000 in 1983, up from 126,000 in 1982, but still considerably below the 1976 peak of 273,000. The reservoir of pent-up demand will ensure relatively strong housing markets during the mid-1980's if interest rates remain stable but declining demographic factors such as household formation will hold down residential construction activity in the later part of the 1980s and into the 1990s. Housing starts will likely average between 190,000 and 200,000 in 1985-90, down from the average 223,000 level of the 1970s.

While a pick-up in housing markets is a prerequisite for recovery in the lumber industry, other end-use markets such as non-residential construction, repair and remodeling and industrial production will account for the bulk of incremental demand for lumber in North America in the period 1980-90. North American lumber consumption is projected to increase at about 2 per cent per year over the forecast period with a slightly higher rate of growth in the United States than in Canada.

The United States continues to be the major export market because of proximity and ease of access. There are virtually no trade restrictions on basic lumber items and certain upgraded lumber products such as pre-stained lumber will now enjoy duty-free access as a result of the MTN. In addition, sales in North America are usually on a small volume basis through numerous wholesalers and are open to most producers regardless of size. The relatively

low exchange value of the Canadian dollar for U.S. currency coupled with productivity gains from increased automation and use of small log processing systems have made Canadian lumber highly competitive in the U.S. market. Canada's market share increased from 21 per cent in the early 1970s to 28-30 per cent in the early 1980s.

This increased market share at a time of severely depressed market conditions has raised new protectionist pressures against Canadian lumber in the U.S., particularly from producers in the Pacific Northwest that depend on high cost public timber. These protectionist pressures together with anticipated increases in U.S. supply underline the importance of developing offshore markets as an alternative to the highly cyclical U.S. market. Exports to offshore markets accounted for almost 40 per cent of the total value of Canadian softwood lumber exports in 1980 and for about one-third of total Canadian production. These figures are more than double those of even a few years back and there is significant potential for further growth in this area. Given the relatively large Canadian capability to supply construction grade lumber, considerable efforts have been undertaken to develop Japanese and West European markets for these grades, primarily through the Cooperative Overseas Market Development Program (COMDP) in place in British Columbia. This is a program funded by the federal government, the B.C. government and the B.C. industry and was renewed for a third five-year term in 1981.

A strong basis for long term market penetration has been achieved through official acceptance of Canadian residential construction methods and lumber specifications in building codes and product standards in Japan and some EEC member countries. Several producers in Canada, particularly on the B.C. Coast have taken special efforts to produce the unique grades and sizes demanded in offshore markets in addition to Canadian specifications. Offshore shipments from Eastern Canada, especially from Quebec to Europe, North Africa and the Middle East have also increased considerably in recent years. The Department is now looking at the desirability of extending the COMDP concept to accommodate the offshore market development requirements of the wood products industry in all regions of Canada.

In general, offshore demand for Canadian lumber will likely depend more on further market development success than on increases in new housing construction in the EEC and Japan. In Japan, the housing boom of the 1970s will tend to level off in the 1980s. Recent demographic trends and major progress in rehabilitation of existing housing stocks suggest slower growth in Japanese lumber

consumption. Nevertheless, significant growth can be expected in the use of the Canadian platform frame housing system in these two market areas which will be of particular benefit to Canadian lumber and plywood exporters. U.S. lumber producers have taken a new interest in offshore markets and have established a joint government/industry market development program under "cooperator agreements" with the U.S. Department of Agriculture, Foreign Agriculture Service.

Exterior Panels

This category includes softwood plywood and waferboard.

The softwood plywood industry consists of 16 companies operating 28 mills of which 22 are located in British Columbia and account for about 85 per cent of production. The remaining 15 per cent is produced by 3 mills in Alberta, 1 in Saskatchewan and 2 in Ontario. Employment stands at about 9,000 workers. In addition there are about 8 mills producing softwood veneer for consumption in domestic and U.S. plywood plants. Total shipments in 1980 were 2.7 billion square feet valued at \$492 million, about 21 per cent of which was exported, predominantly to the EEC.

The EEC is expected to remain the major export market for Canadian softwood plywood. In Japan, the lack of official acceptance of Canadian softwood plywood in the Japanese plywood standard impeded market penetration but this impediment has been removed and future prospects look good. The U.S. market is expected to continue to preclude Canadian softwood plywood because of continuing tariffs and unfavourable competitive cost problems in Canada, particularly on the B.C. Coast.

Waferboard is used in the same construction and industrial applications as softwood plywood and has until recently been primarily a Canadian development. The Canadian waferboard industry currently comprises 11 operating mills and employs about 1400 persons. A new mill is currently under construction in Edson, Alberta which will raise Canadian capacity by about 100 million square feet by 1984. In 1980, total shipments were 653 million square feet valued at \$80 million; 52 per cent of which was exported to the United States. Ontario accounted for 23 per cent of total shipments, Quebec 10 per cent and all other provinces 67 per cent.

In view of the significant market potential that has developed for waferboard and oriented-strand board (OSB), the construction of new mills has accelerated in the United States. As a result, U.S. waferboard and OSB capacity has caught up to Canadian capacity in the short

space of a few years and with six additional mills coming on stream will surpass Canadian capacity by over one-third by 1984.

Production of waferboard grew rapidly in Canada during the 1970s to a peak in 1981 but was down considerably in 1982 with declining domestic and export demand. Production of softwood plywood declined steadily in the late 1970s and early 1980s dropping by 20 per cent between 1978 and 1981. Market conditions were considerably worse in 1982 but will show considerable improvement this year. Over the medium-term, waferboard is expected to continue to grow rapidly at about 5 per cent per year and penetrate end-use applications in housing, non-residential construction and industrial markets at the expense of softwood plywood. The softwood plywood industry will therefore be under increasing pressure to find alternative markets abroad or develop specialty products. Similarly, the much larger U.S. softwood plywood industry can also be expected to intensify its marketing efforts in Europe and elsewhere as its domestic market is further eroded by waferboard. Canada's share of U.S. waferboard markets dropped to 30 per cent in 1982 and will continue to decline for the next few years due to the significant expansion in U.S. waferboard/OSB capacity. Nevertheless, the volume of exports to the U.S. will continue to enjoy healthy growth.

Shingles and Shakes

The shingle and shake sector encompasses manufacturing facilities in both eastern and western Canada with the majority of production originating in British Columbia. Cedar is virtually the only species used to produce shingles and shakes and consequently plants are located in regions where this species grows in commercial quantities, i.e. western red cedar in British Columbia and eastern white cedar in Quebec, Ontario and the Maritime provinces.

Due to the nature of the industry, it is extremely difficult to identify the number of manufacturing firms. Capital intensity is characteristically low due to the nature of the manufacturing process. It is estimated that in 1982 there were 200-220 such firms across Canada with approximately 160 in B.C. Many of these firms operate on a sporadic basis according to market demand which is highly cyclical and employ less than 10 people.

A number of major integrated forest products companies in British Columbia produce shingles and shakes. The smaller, independent firms supply either the market place directly or sell to the larger firms that have extensive sales capabilities in export markets. In Quebec, a number

of small mills sell their products through a central sales agency, such as Sovebec, whereas, the Maritime producers tend to sell on an individual basis.

Shipments, as reported by Statistics Canada, do not reflect total sector activity as many of the smaller producers do not report production. However, it is generally accepted that production usually exceeds exports by some 10 per cent. Exports have been relatively static over the last few years and were valued at \$156 million in 1982. Of this, 97 per cent or \$152 million went to the United States. The remaining \$4 million was directed to offshore markets such as Japan, the U.K. and other EEC countries.

The outlook for this sector remains somewhat clouded with potential market access problems in the U.S. The two biggest markets in the U.S. (California and Texas) are closely monitoring the use of untreated shakes and shingles in residential home construction. In fact, some municipalities within these States have enacted bylaws that require shakes and shingles to be treated to attain certain fire retardancy ratings. These enactments significantly increase the price of shingles and shakes, making them less cost competitive with other roof coverings.

In an attempt to diversify existing markets and develop new ones, the Council of Forest Industries of British Columbia under the Cooperative Overseas Market Development Program, has expended considerable effort on the offshore promotion of shakes and shingles over the last few years. These efforts have been successful in continental Europe, Japan and New Zealand, but continued vigilance is required to ensure continued access to these markets.

Millwork

The millwork sector encompasses over 1,200 manufacturing operations whose chief activity is the further processing of primary wood products such as lumber, particleboard and plywood into a wide range of end products; namely, windows and doors, kitchen cabinets, flooring, interior woodwork, mouldings and roof trusses.

Most of these establishments (98%) are small (less than 100 employees), non-integrated, privately owned companies serving primarily localized domestic markets. In 1980, total factory shipments were \$1,131 million, \$80 million of which was exported to the U.S. and overseas markets. Total direct employment was 20,672.

The industry has traditionally been oriented to the domestic market, its development paralleling an expanding

construction industry in Canada. With the unprecedented growth in housing requirements beginning in the early 1960s, the value of factory shipments grew ten times over the 20 year period. The industry had little incentive to look for and develop alternative markets outside its immediate locale. As a result, it was poorly positioned to react to the sharp market downturn in the early 1980s. The sector experienced unprecedented levels of company collapse and bankruptcy, particularly among the smaller companies with limited financial and managerial resources.

Capital intensity in the millwork sector is characteristically low. Due to the multiplicity and simplicity of the vast majority of products a very small company with a minimum of capital investment is able to set up shop and supply a local or regional market. This frequently results in a surplus of small non-integrated operations competing for shares in the market and a high turnover rate as firms enter or leave the industry. Not only does it mean a continuous state of over-capacity, it also creates a situation where economies of scale are not realized. The end result is an inherently low level of efficiency in the sector.

Domestic market prospects for the sector appear to be less than buoyant in the medium term as all available projections of future housing requirements point to a steady decline in Canadian housing activity over the next two decades. With the exception of a modest improvement in 1983 and 1984 from the low housing levels over the last two years, the demographics underlying these housing projections are extremely unfavourable in Canada and point to levels of housing activity in the 1980s some 20 per cent below the levels obtained in the 1970s.

The expanding do-it-yourself and renovation markets will alleviate this situation somewhat over the medium term as this market segment is expanding some 10-15 per cent annually. The export market appears to offer excellent opportunities for future growth in the sector. With exports currently running at a level of some \$80 million, up from \$6 million in 1975, there are strong indications that a virtual tripling of this total can be achieved by 1990. A small number of companies in the sector have moved to take advantage of export opportunities while others, given the proper financial backing could be successful in penetrating the international market. Western firms have tended to look at markets in the western United States and the Pacific Rim while eastern firms are oriented to markets in Europe and the eastern and midwestern United States.

Pre-fabricated Housing

The pre-fabricated housing sector encompasses those manufacturing operations whose chief activity is the manufacture of prefabricated or pre-cut buildings of wood or wood frame construction. Prefabricated (factory-built) buildings include all buildings that are pre-manufactured at a plant either in sections or in components for "on-site" erection.

In 1980, 102 companies were classified to this industry. Total factory shipments were \$295 million, \$67 million (23 per cent) of which was exported, primarily to offshore markets. Total employment was 4,194 workers. Only 9 firms have more than 100 employees but these companies accounted for about one-half of total production suggesting some dominance of the sector by a small group of relatively large firms.

It is important to note that the sector has been in a state of decline since 1976 when total factory shipments stood at \$257 million and employees numbered 6,517. Until 1976, the sector had experienced healthy and sustained growth in response to a rapidly expanding domestic housing market and growing export opportunities. Shipments increased from less than \$20 million in the early 1960s to a high of \$365 million in 1976. Unlike the millwork sector, activity in export markets has always been a key element in the development of this sector. Countries with major resource and hydro development projects have had high priority. While business in some traditional overseas markets such as the Middle East has declined, the volume of exports to other countries was remarkably stable until the downturn last year.

Significant reductions in manufacturing activity have taken place in the Canadian market over the last few years. The loss in production, in fact, is more substantial than that indicated by declining factory shipments when the inflation factor is taken into account. Specifically, the sector produced 8,272 units in 1980, a drop of 36 per cent from the total of 12,847 produced in 1979. Many companies are now running at less than 50 per cent of capacity, placing severe strain on the financial resources of companies and inhibiting market development efforts abroad.

On the domestic front, short term prospects look good until 1985 due to pent-up housing demand but this demand is expected to soften during the remainder of the decade. The only factor which could change this to any appreciable extent would be demand created by large scale mega projects, if and when they materialize. The effect would

be regional in that most of these mega projects are tied to energy developments in the West and on the East Coast.

In international markets, prospects appear to be somewhat better, particularly in Europe and Japan and in newly industrialized countries where energy developments could create a large market demand for manufactured housing. Favourable exchange rates and increased interest in the energy efficiency of timber frame housing could provide Canadian manufacturing operations with a further competitive edge. Export activity in the medium term is expected to recover back to the \$120-\$125 million annual levels.

Companies in this sector generally have the managerial and financial depth for innovative product and export development. The Government has undertaken a concerted timber frame promotion program in Europe and Japan over the last ten years. This has laid the ground work for future market success for Canadian manufactured housing units as was recently achieved in Italy. Trade fair participation and PEMD support have been additional aids. While the effort has not achieved any notable expansion of total exports, it has managed to counterbalance the loss of market potential in such areas as the Middle East.

2. PAPER AND ALLIED INDUSTRIES

Pulp

Wood pulp is the basic component of almost all types of paper and paperboard. It is sold as market pulp, shipped to affiliated paper mills or consumed directly in integrated operations. The Canadian industry consists of 144 integrated and non-integrated pulp and paper mills with a current annual capacity of about 23 million tonnes, representing about 16 per cent of total world capacity.

Shipments of market pulp, primarily to foreign markets account for about one-third of total Canadian production. Canada is the world's largest producer of market pulp and accounts for about one-third of total international trade in pulp. These exports are primarily bleached kraft grades. Production and exports of sulphite and dissolving pulps have been stagnant or declining. Mechanical pulps are not widely traded given the economics of integration of mechanical pulp and paper production such as newsprint and low product values in relation to high transportation costs.

Market pulp is an important product of the pulp and paper industry in all regions of the country (PEI is the only province with no pulp and paper mills). British Columbia accounted for about 41 per cent of total exports of \$2.9

billion or 7 million tonnes in 1980 and has a high proportion of non-integrated pulp mills. Fourteen of B.C.'s 24 pulp mills do not produce any paper or board. Ontario is the next major market pulp producing region at 25% followed by the Atlantic Provinces (15%), Quebec (14%) and the Prairie Provinces (5%).

Western Europe (excluding Scandinavia) is by far the world's largest import market for market pulp at 7.9 million tonnes in 1980 followed by Japan at 1.8 million tonnes and other countries in Asia at 1.2 million tonnes. The U.S. is both a major importer and exporter of pulp but on balance is a net importer of 1.0 million tonnes. The United States is Canada's best customer accounting for 52 per cent of pulp exports (by value), the EEC is next with 27 per cent followed by Japan with 10 per cent and the remaining 11 per cent distributed among numerous other offshore markets.

Canadian pulp mills have been hit hard by the current recession. World demand fell sharply in 1982 resulting in rising inventories and reduced prices. Shipments fell by 12 per cent in 1982 mostly as a result of reduced exports to the United States and Western Europe. The swing nature of pulp supply whereby partially integrated mills shift from net buyers to net sellers during economic slowdowns makes pulp a highly volatile commodity market. Scandinavian pulp mills were hit harder than Canadian mills in the early part of 1982 with operating rates running about 72 per cent of capacity compared to 83 per cent in Canada as the European market weakened before the U.S. market. This has changed, however, as recent Scandinavian currency devaluations have allowed producers in these countries to capture a larger share of the European market from Canadian and U.S. producers.

While the current downturn will not likely be as deep or prolonged as that experienced in the mid-1970s, little improvement is expected in world pulp markets until well into 1983 and Canadian production levels will not reach 1980 levels until 1984 or 1985. The longer term prospects look more promising however as tight world pulp markets are still anticipated in the latter part of the 1980s given the modest growth in world market pulp capacity. Canada will likely lose some market share in the prime U.S. market as U.S. market pulp capacity continues to expand rapidly in the U.S. South but this is expected to be offset by increased exports to Europe, Japan and other offshore markets. Consumption of wood pulp in Western Europe will grow slowly during the 1980s but Canada should capture a significant proportion of the incremental demand. Market pulp capacity in Scandinavia is not expected to increase above current levels with continued integration of Scandinavian pulp production into paper

manufacturing. Similarly, Japan is expected to become a more important importer of pulp over the medium term reflecting high processing costs in Japan and a general tightening of world timber supplies. The import pulp requirements of other countries in Asia are also expected to grow rapidly during the 1980s but Canada can expect greater competition from new sources of supply from the southern hemisphere such as Brazil and Oceania.

A major constraint to pulp development is the high cost associated with the construction of new facilities. A new greenfield world scale bleached kraft mill would now cost in the order of \$400 to \$500 million. Expansion of existing mills and new mechanical processing facilities have considerably lower capital costs. Total Canadian pulp capacity is expected to reach 25 million tonnes by 1984, up from 21 million tonnes in 1980, based on definite investment intentions of Canadian companies. Expansion will take place in all regions but the largest capacity gains will be in B.C., Quebec and the Maritimes. Most of this increase will be in thermo-mechanical pulp used to support virtually all new newsprint machines being installed in Canada and conversion from stone groundwood pulps at some existing newsprint operations. Market pulp capacity will increase by 10 per cent between 1980 and 1984. With the exception of a new TMP market pulp mill in B.C., this increase is virtually all bleached kraft and results from a major expansion of an existing pulp mill in B.C. and smaller expansions at several mills in Ontario. For the decade as a whole, production and exports of market pulp are projected to grow at about 2.8 per cent per year from 1980 to 1990.

Newsprint

Newsprint is the single largest product sector in the Canadian pulp and paper industry. Canada is the world's largest producer and exporter of newsprint accounting for about one-third of total production and over 60 per cent of international trade.

The Canadian newsprint industry consists of 20 companies with 41 mills. Capacity is concentrated in Ontario and Quebec which together account for about two-thirds of total production but other provinces are taking a larger share of growth in new capacity. British Columbia's current share is 15%, the Atlantic Provinces, 17%, and the Prairies 2%.

In 1982, total production of newsprint in Canada amounted to 8.1 million tonnes, down 9 per cent from 8.9 million tonnes in 1981. The industry is highly export-oriented as about 90 per cent of Canadian production is sold in foreign markets. The United States is by far the largest

market accounting for about 80 per cent of total exports followed by the EEC (9%), Latin America (6%), Asia (4%) with the remainder distributed among a number of countries in Africa and Oceania.

Newsprint shipments in 1981 were only marginally above the previous peak years of 1974 and 1978, but much above those in 1975-76 when the industry was faced with a combination of weak world demand, a major strike and declining competitiveness. The recovery of world markets in 1977-81 was relatively sustained and together with increased prices and depreciation of the Canadian dollar led to significantly increased earnings.

In contrast to the virtually no growth situation of the 1970s, new capacity is now being installed in all regions of the country. Moreover, extensive modernization of facilities, postponed in earlier years because of poor earnings, will strengthen the industry's competitive position for the 1980s. Six new machines came on stream in 1982; 3 in Ontario, 2 in B.C. and 1 in Ontario adding 525,000 net tonnes to capacity. In addition 6 new twin-wire paper formers are being installed on existing machines adding a further 220,000 tonnes capacity. General improvements in speed and efficiency in several existing mills will also add to capacity. After taking into consideration the phase-out of 11 older machines from production, capacity is expected to reach 10.5 million metric tons by 1984, 11 per cent greater than 1981.

Canada is not the only country adding new capacity. U.S. capacity jumped 11 per cent in 1981 but only two new machines will likely be installed over the next few years. Producers in Scandinavian and western Europe are also increasing capacity. The total addition to world newsprint capacity will amount to over 4 million tonnes between 1981 and 1983 with Canada and the United States each accounting for about 30 per cent and Scandinavia and Europe the remaining 40 per cent.

At the same time, world demand for newsprint fell throughout 1982. Low operating rates will characterize the world newsprint industry until the mid-1980s when demand finally catches up with this new supply. Despite a projected increase in shipments of 5 percent from last year, Canadian newsprint producers in particular face a difficult period during 1983 and 1984 because of large additions of new capacity in the U.S., and increased competition from Scandinavia.

Over the medium-term, Canada is expected to continue to lose market share in the U.S. Canada's current share is about 57%, down from 63% in 1979 due to new U.S. capacity, much of which is captive and is located in the fastest

growing consuming and producing region in the U.S.; the U.S. South. In contrast, consumption of newsprint in the Central and Northeastern U.S. regions, the major market for eastern Canadian newsprint producers is expected to continue to be stagnant or decline. Canadian producers will therefore be forced to look at offshore markets for growth and expansion. Overseas shipments were down considerably in 1982, but new opportunities are emerging in East Asia and Japan to support increased offshore exports over the medium-term. Although about 0.5 million tonnes of new capacity will come on stream in Asia between 1982 and 1987, net imports are expected to increase from 1.1 million tonnes to 1.6 million tons over the same period. Competition from Scandinavian producers is expected to intensify in Europe, however, as a result of Scandinavian currency devaluations and duty-free access to the prime EEC market beginning in 1984.

An important feature of demand growth, particularly in North America, will be the continued increased use of inserts in newspapers although the fast growth of the last few years is expected to mature. Another significant trend has been the increase in demand from users other than newspapers for newsprint to replace more expensive grades of paper. Estimates of the future penetration of the electronic media in areas traditionally held by newspapers still vary a great deal. Arthur D. Little Inc. states that by 1990, there will be 28-30 million electronic terminals available in the U.S. with 40 per cent of all workers making use of them on a regular basis, while there will be 8-10 million communicating electronic terminals in 10 per cent of all homes. To date newsprint suppliers do not seem to be too concerned, but such an invasion could have a negative effect on manufacturers of groundwood papers who supply newspapers with the stock for inserts, telephone directory paper and business machine papers.

Other Paper and Paperboard

This category includes a diverse range of products including groundwood specialties, other printing and writing papers, tissue, linerboard, corrugating medium and boxboard. Total shipments of these products amounted to \$3 billion in 1980. The market orientation is largely domestic depending on product. Exports totalled \$800 million in 1980, about one-quarter of production. This group contains both high growth and low growth sectors. In general, tissue, groundwood specialties, and fine papers will enjoy healthy growth in the 1980s while more modest growth is projected for the packaging grades (linerboard, boxboard, kraft paper). The latter sectors will face increased adjustment pressures from U.S. imports and substitute products.

a) Groundwood Printing and Specialty Papers

Shipments of groundwood printing and specialty papers in 1980 amounted to about 830,000 tonnes valued at an estimated \$454 million. About 33 per cent was exported, principally to the United States which accounted for 85 per cent of all exports. Statistical confusion involving newsprint definition has followed the recent removal of U.S. tariffs on many near-newsprint printing papers so that comparison with earlier data may be distorted. The market for these grades has been growing faster than for newsprint and further growth is anticipated. Conversion of older newsprint machines to make such grades will provide more profitable, diversified growth for many newsprint mills.

Between 1974 and 1980, shipments increased at an annual average rate of over 14 per cent, greatly exceeding growth of all paper and allied industry shipments (0.2 per cent). Strong market growth in North America and Western Europe resulted from significantly increased advertising in publishing media (magazines, merchandising catalogues and newspaper inserts) as television advertising has become increasingly saturated and expensive since the early 1970s. In addition, groundwood papers enjoy lower production costs and prices than woodfree printing papers and lower handling and distribution costs including postal rates, because of lower basis weights. Printing techniques have also changed to facilitate greater use of lightweight papers.

Canadian producers are well placed to meet these increased demands as a result of improved access to the large U.S. market, technical advances in processing and product development, and recent expansions and productivity improvements.

Canadian capacity has been increased by about one third between 1980 and 1983 as a result of installation of new machines and conversion of older newsprint machines.

Despite the sudden downturn in 1982, strong market growth for groundwood papers is expected to resume during the 1980s and further penetration of commercial printing markets will likely occur. Shipments of uncoated groundwood papers in Canada are expected to increase at over 5 per cent per year to 1990 with most of the growth occurring between 1983 and 1986.

The U.S. industry has focused attention on coated grades and Canada can be expected to continue to increase its share of uncoated groundwood paper markets in the 1980s. Coated grades account for about 20 per cent of all U.S. groundwood printing and speciality paper shipments and, about 7 per cent of North American shipments.

Canadian producers are well situated to meet the increasing preference of North American publishers and magazine advertisers for groundwood papers with low basis weights for which black spruce fibres are better suited than those of southern U.S. pine.

b) Book, Fine and Misc. Papers

The Canadian industry has an annual capacity of about 1 million tonnes. Over the past 10 years, imports have balanced exports with the exception of 1975-76 and 1981-82 when imports made a significant dent in Canadian markets due in part to weak U.S. home markets. The United States fine paper industry has an annual capacity of 14 million tonnes while the U.S. consumes only 13 million tonnes, leaving a balance of 1 million tonnes for export each year. Three companies in the U.S. each manufacture more paper than the entire Canadian fine paper industry. The main problem in Canada is the lack of rationalization and specialization in an industry with 7 companies manufacturing almost the same number of grades (120-150) as the U.S. industry.

The liberalization of trade between Canada and the U.S. in the MTN will result in new adjustment challenges for the industry. Further rationalization and modernization is required to capture economies of scale and specialization and to take advantage of improved market access to the United States. The rationalization now underway is a major step forward. For example, Fraser Inc. purchased the Thorold mill of Abitibi-Price and is proceeding with grade changes and modernization more in line with their business papers manufactured in New Brunswick and Maine using in-house pulp. Domtar Fine Papers, Canada's largest producer and most active exporter, is reducing the number of grades produced.

In addition, the industry is now looking at installing new machines for the first time in years. Great Lakes Forest Products intends to install a large scale new machine and retire older capacity at Dryden, Ontario. MacMillan Bloedel announced installation of new capacity in B.C. in 1981 but this investment has now been deferred given current economic conditions.

c) Linerboard

Canadian linerboard production has been relatively static over the last 10 years and amounted to some 1.1 million tonnes in 1981. Unbleached kraft linerboard accounts for 78 per cent of this production. The six unbleached kraft linerboard mills that are located across the country have production capacities varying from 3,000 tonnes to 310,000 tonnes per annum for an aggregate annual capacity of 960,000 tonnes. More than 70 per cent of production is sold to the domestic market, primarily to integrated container manufacturing operations with the remaining 30 per cent going to export, principally to offshore markets.

The linerboard mills employ between 4,200 and 5,000 workers. About 70 per cent of production is integrated back to pulp production. Only two of the six mills, one at Kitimat, B.C. and one at New Richmond, Quebec, are market linerboard mills. The others supply products to divisions within their own corporate group, to some captive overseas operations and to some market customers.

Kraft linerboard is one of the few grades of packaging paper and board that can be classified as a worldwide export commodity item but Canada's share is only 9 per cent in contrast to the U.S. share of 62 per cent. The U.S. by virtue of its massive supply capability is a world price leader. Economics of scale in the larger Canadian mills are offset by higher manufacturing costs-particularly vis-a-vis the south eastern region of the U.S. Little, if any, increase in Canadian capacity is anticipated over the medium-term.

d) Corrugating Medium

Canada produces about 480-500,000 tonnes per year of corrugating medium of which approximately 80 per cent is semi-chemical medium with the balance in recycled medium. Of the seven Canadian mills that produce semi-chemical medium, five ship the major proportion of their output to integrated container plants and offer the balance to independent domestic container plants or to export markets.

World trade in corrugation medium is almost totally confined to the semi-chemical grade and is relatively small in comparison with the movement of kraft linerboard. In 1980, world trade accounted for just over 700,000 tonnes of corrugating medium with Sweden and Finland taking approximately 65 per cent of that volume. Canada at some 180,000 tonnes, accounted for

approximately 25 per cent of the market. The major export markets for Canada are Latin America, the U.S. and Europe.

Exports in the recycled grade are negligible and amounted to less than 2,000 tonnes in 1980.

e) Boxboard

Canadian production of boxboard amounted to some 670,000 tonnes in 1980. Capacity is concentrated in Eastern Canada where eleven of the twelve producing mills are located. While some degree of integration exists, it does not compare with linerboard grades. Approximately 30 per cent of production is shipped to integrated box plants and the balance is offered to open market purchasers.

Boxboard is not a world trade item even to the limited extent that corrugating medium is. Canadian exports seldom run to more than 5-6 per cent of production most of which is sold in the United States.

Converted Paper Products

The converted paper products sector is characterized by a mix of companies ranging from large integrated multinationals to family-owned single plant operations. It consists of several subsectors each with varying and unique problems and opportunities. The major subsectors include Consumer Disposable Products; Specialty Commercial Paper Products; Institutional Paper Products; Wallpapers; and Packaging.

The converted products sector supplies virtually every other manufacturing, processing and service sector in the economy. As a result, there is a fairly direct correlation between the industry's performance and the performance of the economy as a whole, with a time lag factor of approximately six to twelve months. Opportunities exist for those subsectors and individual companies capable of undertaking innovative product design, adjusting to new materials and changes in consumer demand and operating efficient production units.

The Consumer Disposables Product subsector for example holds some promise, especially in the area of specialty products for medical and geriatric use, due largely to the increasing average age of our population. The Canadian industry will have to move quickly however, before the market is saturated by imports.

Projections for the folding carton industry indicate better than average growth based primarily on growth in pharmaceutical packaging. Projections suggest a current growth rate in this product of 10 to 13 per cent. On the other hand, companies producing only paper bags and basic paper packaging products face a constant and losing battle with "plastic packaging". Recent innovations such as polypropylene, and linear low density polyethelene have contributed to the problem. Many of the paper bag manufacturers have diversified into plastic bags and the prospects in both the medium and long term are for further rationalization.

The extent of international marketing in the converting sector varies considerably between subsectors, although all are exporting to some degree. Tariff and non-tariff barriers are a major constraint. Overseas markets are generally difficult to serve as developed countries tend to have competitive converting facilities. Developing countries often choose the paper converting field to encourage industrial development as there is a ready domestic market available, and the more simplistic products can be produced using a high labour content. Consequently, corrugated containers, bags, and basic packaging materials are generally not exported.

At the other end of the spectrum, the wallpaper industry is extremely export-oriented with all Canadian companies exporting to the U.S. and the majority marketing products worldwide. In other subsectors, the degree of involvement in export varies from company to company depending largely on the willingness of management to put forth the additional effort, which in turn is often a reflection of the volume of business enjoyed in the domestic market. The projected slow growth in domestic markets will continue to encourage a greater commitment by all producers to the export field.

Small businesses which represent a significant portion of the paper converting sector are generally competitors of the primary producers, which provide their raw materials. Spin-off benefits of R&D, joint ventures and major projects often accrue to small companies from large firms in other sectors. For example, the establishment of a large food processing complex could well offer a spin off opportunity to a small firm to develop and produce the packaging products required.

Technological development in the sector are centred primarily around new product development or product

improvement versus basic R&D. For example, the recent commercial production of vacuum metalized papers and film (most under license from Europe) has provided a new raw material for both the packaging and label industry. The packaging subsector has and will continue to lead in this area, developing variations to existing products as new techniques and packaging systems are developed and/or new government regulations for food or drug packaging are introduced. Firms in this sector must constantly monitor changes in consumer tastes and needs. Graphics and creative package designs are of utmost importance.

In the past, the domestic market has been sufficient to maintain a satisfactory level of business activity and exporting has not been a priority. Current and projected domestic market conditions have made the industry more export conscious but many, especially the smaller firms, lack the expertise and occasionally the confidence to enter the export field. This will have to change.

3. LOGGING INDUSTRY

The logging industry includes over 3,000 establishments engaged in the harvesting of Canada's forest resources. There are 50,000-60,000 workers employed in this sector. Shipments were valued at \$4.6 billion in 1980 and were largely logs and pulpwood for processing in domestic wood and paper industries.

Logging industry shipments are estimated to increase on average at 2.0 per cent between 1980 and 1990. This rate is below the anticipated annual growth of forest product shipments (2.3 per cent). Industrial roundwood requirements in the wood, paper and allied industries will grow at modestly reduced rates for two major reasons. First, improvements in processing can be expected to bring about more efficient utilization of wood per unit of output. Second, the trend towards greater use of wood residues, which grew from 26 to 48 per cent of total wood fibre used in pulp mills in Canada between 1970 and 1980, will likely continue.

